INTERGLOSSA

A DRAFT OF AN AUXILIARY FOR A DEMOCRATIC WORLD ORDER, BEING AN ATTEMPT TO APPLY SEMANTIC PRINCIPLES TO LANGUAGE DESIGN

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PELICAN BOOKS

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INTERGLOSSA

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Czech or Chinese
Learn it with ease,
Basque or Bantu
Can too.

Burnet Woolf

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FOREWORD

Some people may ask why a scientific worker should devote empty hours of fire-watching in Aberdeen to a task which professional linguists might more properly undertake. There is one sufficient answer to this question. Just because they are professional linguists, professional linguists are apt to underrate the linguistic difficulties of ordinary people, and hence to underrate the social importance of the language issue vis-a-vis world peace and world-wide human co-operation. Because natural science is the only existing form of human co-operation on a planetary scale, men of science, who have to turn to journals published in many languages for necessary information, are acutely aware that the babel of tongues is a social problem of the first magnitude. Men of science* more than others, have at their finger-tips an international vocabulary which is already in existence; and a biologist who looks forward to a health-conscious future cannot fail to recognize how popularization of new health standards is daily adding to the stock-in-trade of internationally current words in daily use.

Curiously enough, the first person to devise an interlanguage was an Aberdonian, George Dalgarno. His Ars Signorum came out in 1651. Its successor, the Real Character of Bishop Wilkins, appeared in 1678, issued at the expense and at the request of the Royal Society. From that day to this scientific workers have been prominent in the movement for promoting a world-auxiliary. The world-famed scientist Wilhelm Ost-wald was in the forefront of the interlinguistic renaissance during the latter half of the nineteenth century; and Peano, the mathematician, is the author of one of the best recent projects. So there is no lack of good precedent.

More than three hundred pioneers have already put forward projects such as this. The author of Interglossa does not flatter himself with the hope that it will ever become the common language of international communication. A good enough reason for publishing this draft is that the post-war world may be ripe, as never before, for recognition of need for a remedy which so many others have sought. When need becomes articulate, it will be relatively simple for an international committee to draw on a common pool of effort, seemingly spent with little result. To
that common pool the author modestly consigns this first draft in the hope that readers will make suggestions and offer constructive criticisms as a basis for something better. It is not a primer for the beginner. Were it so, the arrangement would be totally different, and it would be set out with sufficient showmanship to win the confidence of the beginner. Its aim is to enlist interest among those already familiar with the controversies * which Basic English and other recent projects for an international auxiliary have excited. Consequently it touches on many issues which are not necessarily relevant to the task of learning it. Above all, it is a draft to stimulate fresh thinking. As such it invites constructive criticism from those who are not zealots of a particular faction. The pages which follow are the agenda for a discussion. The author wishes to express gratitude first to Mrs. Dorothy Baker, M.A., for assistance in preparing the final script and the 8,000-word English-Inter-glossa dictionary to follow this volume in the same series, also to Miss Dorothy Whitson who typed successive drafts with unfailing patience and accuracy.

Lancelot Hogben.

*December, 1942.*
PART I
THE DESIGN OF INTERGLOSSA

I. INTERGLOSSA AND ITS PREDECESSORS

What follows is the outline of a project for a new constructed auxiliary. The writer believes that the alternative to barbarism is repudiation of national sovereignties in greater units of democratic co-operation, and that day-to-day co-operation of ordinary human beings on a planetary scale will not be possible unless educational authorities of different nations agree to adopt one and the same second language. The hope that it will be possible to induce educational authorities to do so is not Utopian. In many countries, some instruction in a second language is already part of the school curriculum for all children.

To fulfil the purpose stated above, a universal second language must be one in which children can progress towards proficiency more rapidly than they usually do. If it is to be a natural language, some simplified form of English, such as Ogden's Basic, has no serious competitor. What is not so certain is that it would be wise to choose a natural language. There is much force in the contention that adoption of a natural language as an auxiliary would give those who habitually use it as a mother-tongue a position of undue cultural privilege, that this in its turn would breed resentment against them as a linguistic Herrenvolk, and that such resentment would eventually defeat the end in view. A satisfactory auxiliary must be everybody's language because it is also nobody's language.

Whether such arguments do, or do not, prevail, one thing is clear. In assuming the task of making it easy for others to learn English, Ogden's pioneer labours have brought into glaring relief defects of previous projects for a constructed auxiliary. If the considerations stated above turn the scales in favour of a constructed auxiliary, Ogden will not have laboured in vain. By ingenious manipulation of essentially English syntax, he has pointed to possibilities which none of the pioneers of the International Auxiliary Language movement had taken into account. Proposals put forward so far have one or other of certain drawbacks which have been clarified by criticisms bestowed on them by partisans of others. If Interglossa does nothing more than stimulate criticism by its novel features, it will serve the useful purpose of clarifying a task for others to carry out with greater success.
It is therefore pertinent to specify some outstanding defects of artificial languages which have had a vogue in the past, more especially Volapük (V), Esperanto (E), Idiom Neutral (I.N.), Ido (I), Peano's Interlingua (P), and Novial (N). We can best do so, if we recognize what characteristics make a language difficult to learn. Three major difficulties are: (a) surfeit of grammatical rules, (b) excessive number of essential words which the beginner has to memorize, (c) intrinsic unfamiliarity of the words themselves. Let us compare Basic with its competitors vis-a-vis each of these difficulties.

**International Grammar**

All artificial language projects so far devised have either (a) too much grammar of the wrong sort, or (b) not enough of the right. Of those mentioned, V, E and I retain flexions which English, Dutch, Scandinavian, Romance languages, and even German, have long since discarded. N, which is latest in the field, has more dead derivative apparatus than English. P alone follows the maxim: *the best grammar is no grammar.* Like Chinese, a totally flexionless language, it has gone further than English along the same road. From this point of view it might seem to be a simpler task to learn P than to learn English. The conclusion is dubious if we give due weight to what has been a powerful motive militating against Peano's radical attitude to superfluous flexions of the type characteristic of Aryan languages. To do it justice a digression is here necessary.

Though it is not true to say that all nouns are concrete things or that all words which stand for processes or states are verbs, the converse of the first statement is correct, and it is generally2 true that the verb complex of a sentence is the part which predicates process or state. In a rough and ready way the fact that nouns and verbs have characteristic terminals does mean that we can more easily pick out what is thing, what is state or process—in short, that we can get some sort of picture of the *sentence-landscape*. This helps the beginner to translate a passage which contains unfamiliar words, and

1 Peano is the Italian pioneer of mathematical logic. His work was the starting-point of Bertrand Russell's. Some of it he published in his own auxiliary.

2 Not so the verb *be*, except when it predicates real existence.

by doing so increases confidence in the prospect of further progress.
To say this does not mean that the existence of such terminals or the acceptance of morphological categories characteristic of the Aryan and Finno-Ugrian families is the only or the best way of achieving the same result. There are other devices. Two are: (i) a fixed pattern of word-order; (ii) the existence of empty words, such as the French article which sticks to the noun with the same Romantic fidelity as the substantive suffix of E, and is therefore a signpost pointing to an oncoming substantive.

Because P is the isolating offspring of its highly flexional parent, Latin, it has a poor equipment of empty words, and an aristocratic indifference to the necessity for simple rules of sentence-construction. The fact is that no pioneer of language-planning—least of all Peano—has undertaken the task of investigating what rules of word-order contribute most to intrinsic clarity of meaning and ease of recognition. Like Jespersen, and like his predecessors, all of whom had adopted a much more conservative attitude to structural grammar, Peano never got to grips with the essentials of syntax. The essentials of international syntax include: (a) a sentence-landscape designed in conformity with straightforward rules; (6) elimination of different word-forms with the same semantic content, and other redundant modes of expression.

**Word-economy**

Authors of all projects mentioned above underestimated the difficulty of mastering an unnecessarily *large* vocabulary, and failed to understand the need for semantic spring-cleaning as a prelude to any effective policy for mitigating it. None of them attempted analysis of the irreducible minimum of vocables essential for self-expression. The fact that Ogden has done so, rather than any intrinsic merit of English itself, is one sufficient reason for the popularity of Basic and for its appeal to those who regard projects for an artificial auxiliary with little favour. Peano, who was mainly concerned with the needs of science and technology, made no attempt to keep an essential word-list within the limits of what ordinary people without a large vocabulary of technical terms can easily learn. The authors of V, E, I.N., I and N made a half-hearted attempt which has justly earned the vigorous criticism of Ogden and of some of his supporters.

What word-economy recent designers of constructed auxiliaries have aimed at achieving is of one sort only. On what seem to be purely *a priori* grounds, they have chosen batteries of affixes to multiply word-forms
with the same recognizable root. Some of these affixes merely trail in
the peculiar grammatical traditions of Aryan languages. Some have
absolutely no semantic content at all (cf. E um for indefinite relationship).
Others (e.g. E bo- for in-law as in mother-in-law) are merely shorthand
for trivial types of relationship sufficiently expressed by other and
necessary formal elements already part of the verbal stock-in-trade. The
authors of E, I, I.N. and N tried to establish order where chaos existed
(cf. -ship, -dom, -head, -hood, -ity in English) without probing into the
intrinsic value of what they were salvaging. When we look at the result
as a whole, their choice of derivative affixes reflects the same preoccupation
which motivated the prevailing attitude to flexion.

The only satisfactory way of dealing with the problem of word-economy
is Ogden's way; to start with words as experimental material and analyse
what semantic elements enter into large classes. It may well, and in fact
does, happen that these elements have little relation to the pattern of
derivative affixes or of flexions in languages which have grown in the
haphazard manner common to all existing natural ones. This very fact,
as Ogden's work so richly illustrates, has a corollary which enthusiasts
for auxiliary language proposals have been slow to recognize. If Ogden
has achieved such outstanding success within the strait-jacket of acceptable
English usage, what economies might be possible if someone undertook
the task with complete freedom to prescribe an idiom best suited to
maximate word-economy?

**International Word-material**

When all is said and done, learning a language involves memorizing
a large number of new words. When we have reduced the number as far
as we can without prejudice to the end in view, the beginner has to
commit to memory what remains. Ease of doing so depends largely on
familiarity with the material, i.e. on what associations we can make when
first confronted with any single vocable. It is passible to reduce to
negligible dimensions the load of new words with no helpful associations
for the beginner, if we take stock of three facts:

(i) During the past two centuries, science has created a world-wide
    technical vocabulary;

(ii) As modern technology transforms everyday life, what was once
    the vocabulary of the laboratory becomes the vocabulary of the street-corner.
(iii) Scientific terms such as stratosphere, aeroplane, heteror dyne, panchromatic, telephone, phonograph, gramophone, and hundreds of others on the lips of every schoolchild to-day come almost exclusively from Latin or Greek, more especially from Greek.

To the extent that Latin roots predominate in all the projects mentioned, all of them, like English itself, have a large stock-in-trade of truly international roots for which the beginner can readily make associations. The fact remains that most artificial languages have a large stock of national words presumably included to propitiate national sentiment of one sort or another. Thus Novial, the latest arrival, is essentially —like English—a Latin-Teutonic hybrid, and the Teutonic ingredients are sheer dead-weight to anyone who does not speak German, Dutch or a Scandinavian dialect. The same criticism does not apply to the flexionless, but otherwise scholarly, Latin of Peano. With due regard to the number of borrowed Greek words in classical Latin, P is open to a criticism applicable to every constructed language yet devised. None of them contains as high a proportion of Greek roots as English itself.

A truly international vocabulary must be the offspring of technology, and technology increasingly turns to Greek rather than to Latin for new material. Of the many who know that micro- means small, few know that parvus means the same. Current articles on nutrition and psychology in any woman's journal, or on photography and radio in any schoolboy's magazine, illustrate the daily invasion of everyday speech by Greek roots. Peano apart, authors who have put forward plans for constructed auxiliaries lived at a time—or like Jespersen formed their views at a time—when few scientists and technicians, still fewer linguists, anticipated the present tempo of infiltration of Greek roots into everyday life. Consequently artificial languages so far proposed scarcely touch the fringe of the problem of word-familiarity. In the simplest possible terms, our task is to assemble a vocabulary based on internationally current roots of which the semantic content is as transparent as that of geo-, aer-, tele-, phon-, graph-, micro-, phot- and the like. The possibility of achieving this result gives the problem of word-economy a new impetus. The success of our efforts in part depends on keeping the number of words required within the limits of equipment at our disposal.

The mere fact that there is already an international vocabulary of medicine, of agriculture, of horticulture, of navigation, of mensuration,
of astronomy, of chemical manufacture, of engineering, of cartography and of mathematics, or that the number of such terms in everyday speech has increased by leaps and bounds since the time of Zamenhof, are not the only facts about the impact of Science on speech relevant to choice of satisfactory word-material for a properly constructed auxiliary. Equally important is the fact that this existing international vocabulary rings the changes on certain roots which have established firm claims to further use. Consequently we know which way the cat will jump. We can forecast with some assurance what roots of given meaning can or cannot come into general use through the increasing infiltration of new technical terms into daily speech. If need arises to adopt anew technical term to label waterproof autograph forms for water-polo champions, it is highly likely to contain necto, which turns up in many biological names for swimming organisms. If a special root for swimming appliances invades daily speech on a world-wide scale, it is not likely to recall the French word nager or its Esperanto equivalent.

**Essential Features of Interglossa**

From this brief commentary upon the defects of artificial languages exposed by contrast with the considerable merits of Basic English, we now turn to a brief summary of the essential features of Interglossa.

(i) **Interglossa** is a purely isolating language. It admits many compounds built from bricks which are independent elements, but it has no dead affixes prescribed in accordance with *a priori* considerations. In so far as it is a flexionless language, it resembles Chinese (or Peanese), but it differs from P because it has a large stock-in-trade of compounds sufficiently explicit in an appropriate context to anyone who knows or can recognize their parts. It also differs from P with respect to the remaining characteristics specified below.

The reader may here ask whether an isolating language has any advantage over a language of the agglutinative type, i.e. a flexional language like Esperanto with no irregularities. There are three sufficient reasons for preferring the former:

(a) Mass production in language tuition calls for maximum division of labour in the plant. That is to say, maximum word-economy in the sense defined above implies maximum mobility of all the elements of meaning.
(b) Familiarity breeds contempt. That is to say, flexion, however regular, forces units of meaning into situations where they are irrelevant and therefore more liable to semantic erosion.

(c) The grammar of an isolating (analytical) language is the highest common factor of all grammar. It is the native idiom of China, and does not confront the Japanese or the Bantu with the arbitrary difficulties inherent in any agglutinative language based on Aryan models. In short, any language designed like V or E imposes the grammatical idiosyncrasies of a particular language family on everybody who uses it. Unlike its predecessors, designed exclusively, and admittedly,¹ to meet the taste of Western Europe and the English-speaking peoples, Interglossa is for a world in which China, Japan, and eventually the peoples of Africa, will march in step with the U.S.S.R. and with western civilization.²

(ii) Interglossa has a very rigid and straightforward word-order, with features designed to limit recourse to congested expressions. The pattern is the same for statements, questions, requests, commands, and for all classes of subordinate (including relative) clauses. The verbal stock-in-trade of Interglossa includes a small battery of empty words to act as signposts of sentence-landscape. For the same reason, certain classes of words have a characteristic final syllable, but these classes do not correspond to arbitrary non-semantic categories (parts of speech) defined by flexions. Interglossa has no flexions.

(iii) Interglossa has a vocabulary based on internationally current roots. It therefore has a Greek content enormous in comparison with that of earlier projects. Its very name symbolizes the fact that it is a Latin-Greek hybrid, as Novial is a Latin-Teutonic hybrid. Since we have many Latin-Greek alternatives in current international technical terms, it is possible to combine the claims of word-economy vis-a-vis self-expression (see p. 22) with the advantages of a residual battery of synonyms for stylistic purposes.

¹ See Jespersen, An International Language, p. 53 and elsewhere.

² An isolating language has a further advantage. It is easy to make every element explicit through visual aids. Thus freedom from lifeless affixes simplifies the task of instruction through the medium of the universal picture-language isotype without recourse to exposition in the home vernacular. We can therefore contemplate production of manuals for a world-wide market. The history of Japanese writing sufficiently shows the difficulties which beset the attempt to adapt a pictographic script to a language of the agglutinative type.
Each word has a number, and if *Interglossa* sufficiently interests the public it will be easy to test out the claims to priority of two or more synonyms for each numbered pigeon-hole in the semantic schema which follows. Designing all the details of a fully-fledged interlanguage is not a one-man job. Mass observation on the basis of questionnaires sent out to different groups of people of different nationalities would settle which words in each pigeon-hole are entitled to *first rank*. Readers may suggest alternatives, and an international committee could submit the result to ballot.

The use of *psychologically live word-material* necessarily limits an ideal solution of the *phonetic* difficulties of learning languages. Fortunately the Mediterranean vowel battery is small, but Greek abounds in consonant-clusters which offer great difficulties to people who speak Japanese, Chinese, Bantu or Polynesian dialects. Where equivalent Greek and Latin roots are internationally current, this fact should guide the choice of the designer and that of the beginner (see p. 35). We can take advantage of Latin and Greek alternatives to exclude homophones (cf. the root homophone *sol* in *solar* and *solitary*). The root *xero* in many botanical and horticultural terms (e.g. *xerophyte*) would be a near-homophone to *zero*, because many people find it difficult to pronounce an initial *x* as *ks* Or *z* as *ts*. So it cannot have first choice as the equivalent word for *dry*.

If we aim at easy recognition and easy association, it is fatal to maltreat roots for the sake of uniform spelling. *Uniformity is less important than consistency*. It does not matter whether one sound always has one symbol. What does matter is whether the same symbol stands for only one sound (cf. the vagaries of *G* and *J*, *S* and *Z* in English). The main difficulty about the spelling conventions of a Latin-Greek stock-in-trade of words is that different nations do not follow the same plan with respect to Romanization of Greek roots, e.g. French, German and English have PH where Scandinavians and Italians use the F. Since the international binomial nomenclature of systematic biology, and that of anatomy and chemistry, stick to the older forms, *Interglossa provisionally adopts them*. As Ogden has emphasized, spelling is a secondary issue, if a language has great potential word-economy

(iv) *Interglossa* has a system of word-economy which takes full advantage of its analytical grammar, and hence combines features

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1 And we may leave the details to an international committee.
characteristic of Basic English and of Chinese. To clarify the principles involved, two terms are useful. As we call identical vocables which mean different things *homophones*, we may call different vocables with the same semantic content *homosemes*. Likewise we may call words with a common element of meaning *coenosemes*. Thus *ascend* (go up) and *descend* (go down) are coenosemes, as are *study* (work-room) and *worker* (work-man). The word *homoseme* does not mean quite the same as *synonym*. *Big*, *large* and *great* are synonyms in the most everyday sense of the term; but the homosemes *much* and *great* are not. The reason why most of us hesitate to call them synonyms is that they are not always interchangeable. The rules of grammar prescribe a definite context for each. *Much* predicing *largeness* may be the qualifier of a verb or another epithet, *great* can predicate *largeness* of nouns alone.

As Chinese is handicapped with an overgrowth of homophones, Aryan languages are overloaded with *homosemes*, which produce difficulties of the opposite sort when a person new to their idiosyncrasies tries to learn them. In contact-vernaculars such as *Beach-la-Mar* or *Pidgin-English*, we get a practical demonstration of what happens when a multiplicity of semantically redundant word-forms defeats the comprehension of the newcomer; and we can apply the lesson to the design of a constructed language. Relatively little economy by reduction of homosemes is possible within the framework of acceptable English idiom; but the only limit to doing so in an artificial language is the need to keep a clear prospect of "sentence-landscape" in view. The author of Basic English has made the very best of a bad job by pruning the luxuriant overgrowth of English coenosemes to the limit consistent with educated speech.

The combination of both principles, i.e. reduction of *homosemes* as in Chinese and of *coenosemes* as in Basic, is a distinctive feature of *interglossa* among artificial languages put forward to date. The outstanding characteristic of word-economy in Basic is the reduction of *verb* coenosemes by recourse to *verbal operators*. In combination with other words these eighteen operators do all the work of four thousand verbs in a French dictionary, and far more in an English one. In a constructed language we can do the same with noun coenosemes. Within the framework of English usage we can make *postman, hangman, milkman, dustman* with the common seme *man*; *playhouse, bakehouse, alehouse* with the common seme *house*; *footwear, handwear, headwear* with the common seme *wear*. In the design of a constructed language with a rich assortment of
generic terms we are free to build up a host of other domestic and occupational compounds without adding new elements to our word-stock. By the use of the negative particle as a qualifier equivalent to the affixes un- or in- of untrue, unclean, incompatible, we can also eliminate the need for many "opposites" for which natural languages prescribe separate words.

At this point partisans of Basic English may ask why it is necessary to list 880 vocables in place of the 850 essential items on the Basic English word-list.¹ The answer is that the figures are not comparable. Interglossa and Basic English start from different assumptions about how much work a single word can profitably do. If the end in view is to make things easy for the beginner we have to bear in mind two considerations:

(a) Suitable definition of familiar objects often calls for more effort than learning a new label;

(b) When no common thread of meaning connects one use with another, an additional label is not necessarily more difficult to learn than an additional use of the same vocable.

¹ The list of essential vocables on pp. 249-256 contains 880 numbered items and an additional 74 of which the internationally current form is consonant with the phonetic pattern of Interglossa. Actually our list of 880 numbered items contains at least twenty words which are internationally current in the form prescribed, e.g. agenda (809); bureau (816); cardo (740); coxa (533); data (827); fenestra (714); flora (581); lamina (757); libido (284); major (45); minor (46); minus (115); plus (118); propaganda (846); radio (386); spatula (775); telefon (855); telegram (856); zero (26). The names of the metals are simply the plural forms of the corresponding items in the international periodic table. Plural forms which are also internationally current include spectra (662) and entera (502). It is therefore fair to say that our list of essential vocables Other than words which we can adopt from the international vocabulary of technics or commerce without any change of form contains less than 860 constructed elements in all. In reality the 850 word-list printed on a folded slip in the primers of Basic omits 17 necessary pronouns and possessives, 32 numerals and 56 flexional forms of the operative verbs. If we charitably overlook the fact that Basic operates at large with the -ing and -ed terminals without a general rule about what class of words invariably take them or about how they affect the meaning of the end-product, it is fair to say that Basic demands mastery of at least 950 distinct vocables, not counting calendrical items.
In its choice of abstract terms Basic English takes a highly indulgent attitude to what constitutes a common thread of meaning. When we apply one word *sharp* to a remark, to a tooth, and to a pain, the only thread of meaning common to all three situations is a vague value judgment; and if we let metaphor have full rein in this way it is easy to keep down the number of items on our word-list. Indeed, there is only one limit to the process of reduction. In the end we are left with two vocables, one for approval, the other for disapproval. Admittedly, we cannot set a limit to suggestive use of metaphor in daily life. Nor can we draw a clear-cut boundary between metaphorical and generic usage of words. Still, we can provide a sufficient number of specific terms for qualities with no very obvious connexion; and this has been the aim of the author.

A constructed language cannot admit words of so diverse semantic content as *order*, listed in the miniature *Basic Dictionary* as meaning: *arrangement, sequence, class, command, religious body, decoration.* It cannot admit such definitions as (ibid.) "undertaking" for *enterprise* and "(statement of) undertaking " for *promise*. Above all, we cannot play ducks and drakes with a native battery of idiom which prescribes such egregious collocations of vocables as the Basic *put up with* for *tolerate* or *put at a loss* for *bewilder*. In what follows the aim has been to keep sharpness of definition within the limits set by two dispensations:

(a) Since action and its product are necessarily co-existent, the same word (e.g. *writing* in English) can suffice for both in a given context;

(b) Where a metaphorical usage is common to equivalent words of different origin and unrelated language families (cf. *tongue-language*.

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1 This is especially true of the hundred items ("Operations"), which make up the grammatical matrix of Basic. Laying aside the eighteen verbs—not one of which has an absolutely clear-cut terrain—the remaining words (82) include such obvious pitfalls for the unwary as *any, some, that, ever, well, still, even, only, all*. The prepositions, on the use of which Basic relies so much, are by no means above reproach. Those that have a single characteristic meaning (e.g. *in*) enter into innumerable and inescapable idiomatic combinations. Several (e.g. *against, with, by*) have more than one characteristic meaning. Others (of, for) are as empty as the "essential" articles *a* and *the*. All in all, at least a third of the words listed as operations are so polyvalent as to claim front rank among the booby traps for the beginner who is learning English.
for the organ of that name and for a local variety of speech) it is permissible to conclude that the link between the two is substantial.¹

The *numerical* word-economy of Basic English owes much to two circumstances which are not propitious to the needs of the beginner. It includes abstract words with wide diversifications of meaning by metaphorical extension; and it has a very small number of names for common objects. In conformity with the principle stated above, *Interglossa* does not aim at economy of either sort. Where self-explicit compounds involving generic terms are not available as names for common things, it is far better to provide a new one than to leave the learner to fish for a periphrastic definition. Consequently, our list of picturable names is almost twice as large as that of Basic English. Basic offers 25 botanical or zoological and 34 anatomical words. Chapter IX of this draft lists 80 botanical or zoological and 68 anatomical terms as numbered items, in addition to 60 plant, animal or medical names not numbered because assimilated without change of the internationally current form.

Choice of words in Ogden's Basic list depends on the exigencies of accepted English usage. So also choice of words in a language designed in accordance with the principles stated above depends less on abstract logical principles than on what internationally current root material is to hand. The system of word-economy implicit in the design of *Interglossa* makes it possible to do with less than 750 words what Basic does with 850; but it would be absurd to restrict the vocabulary within such limits, if only because Basic has a ready-made residual stock-in-trade on which to draw. In a certain sense this is true of *Interglossa*, since *Interglossa* permits coining of new amplifiers or substantives from internationally current roots in accordance with rules prescribed for terminals. None the less, the English dictionary is more accessible than those technical works in which internationally current roots abound.

Common nouns come last in the classes of words arranged in what follows. It is necessarily arbitrary to fix the number of *essential* common nouns, because every occupation and social group within a speech-community has its own peculiar ones. Even novels abound in technical terms which are mere expletives to most readers. One thing which simplifies our task is the fact that an interlanguage word-list need contain

¹ Unfortunately, there is no source to which one can turn for a world survey of metaphorical extensions such as the example cited.
no national names, i.e. words for specifically local institutions (casino, bazaar), officials (kaiser, concierge), proper names (Stalin, Leningrad), or implements (samovar, sjambok). It will tolerate such words automatically, as so often happens in the history of natural languages. This means that people of any speech-community have the last word about how to spell their own towns (Wien, Kebenhavn), or countries (Deutschland, Suomi); and the same words serve as adjectives (e.g. Scotch tweed = Scotland texti). Another class of words calls for similar treatment. Few people talk about gills and fins, unless they have some technical interest in comparative anatomy. Those who have, will know the internationally current terms (branchia and pterygia) for them.

At this point, a necessary qualification to preceding remarks will forestall misunderstanding at a later stage. Semantic rectitude does not prescribe that juxtaposition of two vocables in a particular order must have the same singularity of meaning as have two ordered symbols of a non-commutative algebra. Everyday discourse has functions other than those of mathematical symbolism, if only because it has to engage the interest of an audience. If the fact receives tardy recognition in elementary teaching of highly flexional languages, the study of completely isolating ones, e.g. of the Chinese group, or of an almost completely isolating language such as Anglo-American, forces us to recognize how extensively we rely on context to convey meaning without multiplication of verbal counters or of grammatical devices to complicate the rules of the game. Divorced from its context, we are free to interpret the couplet religious worker as: (a) any member of the working class with religious convictions or professions; (b) a person who does regular voluntary or paid work for a religious organization. In an actual slab of sustained discourse its organic relation to the semantic gestalt would rarely if ever give rise to misunderstanding between English-speaking people; and the disadvantages of sacrificing word-economy or economy of space and effort to legislate for so few occasions would outweigh the benefits.

To some extent, mathematics also relies on context to supply the necessary clue to correct interpretation. For instance, we interpret the cluster \( d2x \) both as a differential of the second order in the domain of the infinitesimal calculus and as the product of \( x \) and the square of \( d \) in the domain of elementary algebra. If we speak here or elsewhere of a couplet or compound as self-explicit, the epithet is therefore shorthand for sufficiently explicit in a context where it will commonly crop up.
Context, and context alone, dictates how we interpret the vagaries of the allegedly "possessive" terminal 's in father's debts, father's death and father's dress-shirt. Context, and context alone, endorses the relationship implicit in churchyard, brickyard, backyard. A little reflection on such illustrations of its role should encourage the fastidious reader to take a tolerant view about the need for hard and fast rules for framing compounds whose meaning is sufficiently suggestive in an appropriate situation. Words are not mere atoms. They are organs of communication. As such, their functions inescapably depend on the whole body of discourse.

**Reading and Self-expression**

Three classes of difficulties discussed in what has gone before do not exhaust those which confront a person who is learning a language. Language-learning involves four skills as different as arithmetic, algebra, geometry, and trigonometry.

The skills necessary for complete mastery are: (a) auditory recognition; (b) pronunciation and intonation; (c) self-expression in writing; (d) recognition of the written word. Whether one of them is more or less difficult to acquire than another depends partly on personal gifts, such as visual memory and mimetic aptitude. Opportunities for use by reading, by travel or by correspondence play a part, as also intrinsic characteristics of the language itself.

Languages which are relatively holophrastic, such as French, offer greater difficulties for auditory recognition than more staccato languages like German. The syntax of German makes reading difficult, and Hottentot clicks or Chinese tones are hard to mimic without special phonetic training. With due allowance to these considerations, one thing stands out clear. On the whole, most people master reading knowledge with least difficulty, and acquire the trick of auditory recognition last of all. With constant use, the latter comes easily to anyone who has acquired the knack of self-expression in writing. So auditory recognition is of minor interest, if the end in view is to make things easy for the beginner.

What is more important is the difficulty of reading relative to the difficulty of self-expression. A difference between the skill required for reading knowledge and the skill required for self-expression is relevant to a criticism unjustly levelled against Basic English. All of us know the meaning of many native words which we never use in speech or
writing, and the gap between the vocabulary of reading and that of self-expression is inevitably greater when our means of communication is "a foreign language. To read a language we need to be able to recognize a relatively large number of words when memory (and ingenuity) is prompted by context. Self-expression involves very ready recollection of a relatively small number of words without extrinsic help. So part of the art of mastering a language is to get a thorough knowledge of a small battery of essential words for self-expression, and a nodding acquaintance with a much larger residual stock for reading.

Since it is much harder to remember words without help from the context than to remember them when the context prompts us, the desirability of designing a language with great potential word-economy is not incompatible with the stylistic advantage of having a copious vocabulary. Ogden has shown us that English has astonishing possibilities of word-economy, and we all know that it has a richer residual battery of synonyms than any other language. This is partly due to its hybrid structure, and Interglossa is also a hybrid. If we want to combine potential word-economy for ready self expression with what versatility of expression safeguards style against monotony, we can take advantage of this fact.

Different roots of international technical terms may have the same semantic content. Hence the problem of choosing word-material is not as difficult as it might seem. We are not forced to undertake a statistical word-count of internationally current roots. Part of our essential word-list offers the beginner a choice of two words. For purposes of self-expression the beginner will naturally choose the one to which he (or she) associates most readily, or can most easily pronounce. For purposes of reading, or communication with others who associate more readily to the alternative form, a cursory study of the word-list will usually suffice.

In this context it is fitting to forestall the intelligible criticism that a page of Interglossa does not look easier than a page of Novial. Anyone who has had a good secondary school education in Britain or America can guess his or her way through a passage of Novial (or other interlanguage of the same type) without the preliminary precaution of consulting a grammar or dictionary. This fact gives anyone who has not thought much about interlinguistic problems an unduly favourable impression of the ease with which it is possible to master Novial. It would not be difficult to construct a highly latinized strip of English through which an otherwise
well-educated Frenchman with no knowledge of our language could also guess his way. English of this type would certainly be more difficult to learn thoroughly than is Ogden's Basic.

To an English reader Novial looks more easy than it is for two reasons. It takes over the grammatical pattern common to Aryan languages (with the semantic inconsistencies inherent in it), and it has a large hybrid stock-in-trade of words from the two major sources of our own. One has less formal grammar to learn than one would have if one set out to learn French or German; but, having traversed the first few milestones, one has still to grapple with the semantic difficulties inherent in the pattern of the Aryan group. One has to go on piling up a word-list without information concerning which words are most essential. The fact that Novial looks so easy to read is a feature of high publicity value. It does not signify that it is also easy to master the art of self-expression in Novial.

To cut down the difficulties by judicious word-economy we have to delve more deeply into semantic issues which Jespersen and his predecessors side-stepped. Inevitably, we find ourselves gravitating away from the grammatical pattern of the Aryan family to a more universal idiom with features common to Chinese. The result is that learning a language so designed is a lively training in clear thinking of a kind which anyone can usefully undertake. In fact, the grammar of Interglossa, as is largely true of Basic, is semantics. Its author does not claim that it is easy to read a page of Interglossa at sight without previous information concerning its structure. It is designed with the aim of reducing to a minimum time and effort necessary for complete mastery of self-expression. From that point of view, all that the average intelligent person can achieve by months devoted to the study of E, I, I.N., P or N should be over in the same number of days devoted to Interglossa.

Here, as elsewhere, word-economy means numerical limitation of vocables necessary for unaffected discourse about matter's of common interest between people of different nationalities. A stock-in-trade of word-material limited in this way will not necessarily offer a compact means of expressing every fine distinction found in a lexicon. To avoid misunderstanding about claims put forward for our essential word-list, it is well to remind ourselves of what Ogden has stressed in the exposition

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1 If only because the acceptable operative constructions on which Basic word-economy depends are Teutonic in origin.
of his own method for adapting English to international use. Dictionary
definitions give a false impression of what precision even well-educated
people do—or can—achieve when they discuss matters outside a common
domain of specialist knowledge. Part of the job of a dictionary is to
divulge what limitations the specialist as such imposes on familiar words
in a particular field of technical discourse. Such limitations do not and
cannot impose a censorship on everyday speech, English-speaking people
who are not biologists use and will go on using the term *bug* without
concern for what limitations biologists impose on it in a discussion at
the Royal Society. They use and will continue to use the term *adultery*
with little, if any, regard for its unilateral definition in canon law. Where
precision is essential at this level of communication, *Interglossa* prescribes
international technical terms if such are available, local terms for local
occurrences, or failing either, small residual batteries drawn up by
specialists concerned by use of internationally current roots in accordance
with rules for expansion of vocabulary in Chapter X. Professor Edgar
de Wahl, author of a project which he has called *Occidental*, and Lott,
the inventor of *Mundolingue*, have done the necessary spade work.

**Teaching Interglossa**

Some linguists will protest that I flatter the public by assuming the
widespread existence of a large technical vocabulary. In fact, those who
are hostile to plans for a constructed language expect to have it both
ways. They underestimate the difficulties which natural languages put
in the way of collaboration between ordinary men and women who are
not gifted linguists, and they overestimate the difficulties of learning an
artificial language, because they are not *en rapport* with the cultural
realities of the modern world. Professors of Greek who do not know
what a heterodyne set is would be surprised at the number of such words
in any hobbies magazine for schoolboys. It is therefore pertinent to add
two comments upon objections of this kind:

(a) The intrusion of international technical terms into daily speech is
daily gathering momentum, especially in countries where there is public
encouragement for scientific research and its application, or good popular
scientific journalism. The spectacular infiltration of such terms into the
Russian language since the Revolution is sufficiently evident in place-names
alone.\(^1\) Because the tempo of infiltration is increasing we can prospect

\(^1\) If pushed to define what is an international root in an age of potential plenty, I
with tolerable confidence what roots are likely to come into daily speech in the near future.

(b) It is not likely that any considerable group of speech-communities will adopt an interlingua unless the forces working for international co-operation are stronger than those which are also working to perpetuate militarism and racialism. To put forward a plan of this sort therefore presupposes confidence in the possibility of a more enlightened world in which the disposition to spread scientific knowledge as a basis of social prosperity and a high standard of communal health prevails. In short, Interglossa, or any other artificial language, is a project for a civilization in which education will deal far more with the realities of health and the productive forces of everyday life, than with the dreary superstitions of the past. Biology is already taking the place of the classics in the school curriculum. A world which can be induced to adopt an auxiliary will be a techno-conscious and a health-conscious world, a world with a much larger common stock of everyday words derived from roots current in modern technology.

Since the word-material of Interglossa is based on roots internationally current in science, every vocable can form the basis of association with familiar words or with new and interesting information about the world we live in. The process of learning the vocabulary can therefore have the excitement of the chase. Thus we track down poly (many) from what is common to polygon and polygamy. From polygon and pentagon the pupil would track down gono (angle), from pentagon and pentameter through gasometer we get penta (five) and metro (measure), thence via cyclometer and bicycle through cycli (circle) via bigamy, giving bi (two) back through polygamy to gameo (marriage). From this we can start in various directions. Anyone who has taken a school course in elementary biology will recognize the last word as the root in gametes (sperm and egg), whose marriage gives rise to the embryo. It turns up again in Phanerogams (conifers and flowering plants) so called because their marital arrangements are manifest (phanero) or clear to the eye in contradistinction to Cryptogams (ferns, mosses, seaweeds and fungi),

would say I mean a root which occurs in : (a) any-technical term in a League of Nations Report on agriculture, malnutrition, public health or the drug traffic ; (b) any proper name printed with a capital letter in a gardener's catalogue; (c) most words printed in italics in the index of The Science of Life, Science for the Citizen, The Outline of the Universe or other book of the same genre.
whose sexual processes are *cryptic*, i.e. hidden (*crypto*). Though they are common in international scientific terms, some of the roots employed in what follows are not yet in everyday speech or in school science instruction. Admittedly, *copa (oar)*, which occurs in international zoological names for many swimming animals with oar-like limbs, is not an ingredient of daily conversation; but since the *Copepoda* (a tribe of small shrimps so called for the reason stated) constitute the majority of animal species in the surface layers of the sea and are the chief food of herrings, the act of learning the meaning of *copa* need not be as lifeless as that of learning the equivalent Finnish word *airo*.

With the help of the teacher the beginner should thus be able to associate the meaning of each new vocable with a word already familiar or with some new and arresting piece of information about the modern world. Since this draft is for the English-speaking reader, it is sufficient to show how to do so if the beginner speaks English. Chapter IV and the mnemotechnic notes on pp. 256-282, give appropriate examples for every vocable listed. The claim of *Interglossa* is that it contains no psychologically inert word-material such as *lapin* or *Knabe*. At the school stage learning *Interglossa* would be learning semantics, everyday science and comparative etymology hand-in-hand.

**APPENDIX TO CHAPTER I**

*word-material of esperanto and interglossa*

Many readers may be unfamiliar with Esperanto except by hearsay. So it is pertinent to set forth, in tabular form, representative specimens of its word-material side by side with the *Interglossa* equivalents. It would obviously be easy to exaggerate the shortcomings of Esperanto by choosing a small battery of samples from a large class of vocables
such as nouns or adjectives. Since space does not permit the author to
give the Esperanto equivalent of every vocable of Interglossa, the only
just way of bringing out the eclecticism of Esperanto and the international
currency of the word-stock of the present project is to give a fairly
complete exposition of certain small classes of words which are of
particular interest from the standpoint of syntax. We shall therefore list
side by side the personal pronouns, numerals, chief prepositions and
conjunctions of Esperanto with their Interglossa substitutes. The right-hand
column gives an Anglo-American key-word to aid recognition of the
Interglossa equivalent; and the reader who has any doubts about the
mnemotechnic credentials of the latter can refer to the notes in Chapter
XI, where each vocable has a reference number, indicated in parenthesis.
## (a) Prepositions

<table>
<thead>
<tr>
<th>Esperanto</th>
<th>Interglossa</th>
<th>Meaning</th>
<th>Anglo-American Key Word</th>
</tr>
</thead>
<tbody>
<tr>
<td>al</td>
<td>a(d)</td>
<td>(76) to</td>
<td>afferent</td>
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<tr>
<td>anstatau</td>
<td>vice</td>
<td>(127) instead of</td>
<td>viceroy</td>
</tr>
<tr>
<td>antau</td>
<td>pre</td>
<td>(73) before(time)</td>
<td>predate</td>
</tr>
<tr>
<td>antau</td>
<td>antero</td>
<td>(77) in front of</td>
<td>anterior</td>
</tr>
<tr>
<td>apud</td>
<td>proximo</td>
<td>(121) beside</td>
<td>proximity</td>
</tr>
<tr>
<td>ce</td>
<td>topo</td>
<td>(101) at</td>
<td>topography</td>
</tr>
<tr>
<td>circau</td>
<td>peri</td>
<td>(96) around</td>
<td>perimeter</td>
</tr>
<tr>
<td>de, da</td>
<td>de</td>
<td>(109) in relation to</td>
<td>DE mortuis nil nisi bonum</td>
</tr>
<tr>
<td>je, pri</td>
<td>de</td>
<td>(109) of, concerning</td>
<td></td>
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<tr>
<td>dum</td>
<td>tem</td>
<td>(75) during</td>
<td>temporary</td>
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<tr>
<td>ekster</td>
<td>extra</td>
<td>(84) outside</td>
<td>extradite</td>
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<tr>
<td>et</td>
<td>e(x)</td>
<td>(83) out of</td>
<td>efferent</td>
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<tr>
<td>en</td>
<td>in</td>
<td>(86) in</td>
<td>insert</td>
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<tr>
<td>inter</td>
<td>inter</td>
<td>(87) between</td>
<td>interface</td>
</tr>
<tr>
<td>kontraǔ</td>
<td>anti</td>
<td>(103) against</td>
<td>anti-fascist</td>
</tr>
<tr>
<td>kun</td>
<td>syn</td>
<td>(123) with</td>
<td>syndrome</td>
</tr>
<tr>
<td>laǔ</td>
<td>harmono</td>
<td>(112) according to</td>
<td>harmonious</td>
</tr>
<tr>
<td>per</td>
<td>per</td>
<td>(117) by means of</td>
<td>per post</td>
</tr>
<tr>
<td>po</td>
<td>ratio</td>
<td>(388) at the rate of</td>
<td>rate</td>
</tr>
<tr>
<td>por</td>
<td>functio</td>
<td>(111) for (the use of)</td>
<td>function</td>
</tr>
<tr>
<td>por</td>
<td>tendo</td>
<td>(125) in order to</td>
<td>tendentious</td>
</tr>
<tr>
<td>post</td>
<td>post</td>
<td>(72) after (time)</td>
<td>postdate</td>
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<tr>
<td>post</td>
<td>retro</td>
<td>(97) behind</td>
<td>retrogression</td>
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<tr>
<td>preter</td>
<td>tele</td>
<td>(39) beyond</td>
<td>telescope</td>
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<tr>
<td>pro</td>
<td>causo</td>
<td>(104) because of</td>
<td>cause</td>
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<tr>
<td>Esperanto</td>
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<td>No.</td>
<td>Meaning</td>
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<td>sen</td>
<td>minus</td>
<td>(115)</td>
<td>without</td>
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<tr>
<td>sub</td>
<td>hypo</td>
<td>(85)</td>
<td>under, below</td>
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<tr>
<td>super</td>
<td>supero</td>
<td>(98)</td>
<td>over, above</td>
</tr>
<tr>
<td>sur</td>
<td>epi</td>
<td>(82)</td>
<td>on (the surface of)</td>
</tr>
<tr>
<td>trans</td>
<td>trans</td>
<td>(101)</td>
<td>across</td>
</tr>
</tbody>
</table>

(b) Conjunctions

| alle      | hetero      | (258) | otherwise | heterogenous            |
| aü        | allo        | (102) | or         | allotropic              |
| car       | causo       | (104) | because    | causality               |
| dum       | tem         | (75)  | while      | temporary               |
| kiel      | specio      | (423) | for example | specimen               |
| eksemple  |             |       |            |                        |
| por ke    | tendo       | (125) | in order that | tendentious           |
| same kiel | homo        | (113) | just as    | homology                |
| kaj       | plus        | (118) | and        | plus                    |
| se        | conditio    | (107) | if (real)  | condition               |
| se        | postulo     | (119) | if (hypothetical) | postulate          |
| sed       | anti re     | (103) | but        | antithesis             |

(b) Comparison

<p>| pli       | major       | (45)  | more      | Ursa Major             |
| malpli    | minor       | (46)  | less      | Ursa Minor             |
| tiel      | iso         | (44)  | equally (as) | isosceles           |</p>
<table>
<thead>
<tr>
<th>Esperanto</th>
<th>Interglossa</th>
<th>No.</th>
<th>Meaning</th>
<th>Anglo American Key-word</th>
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<td>(d) Articles</td>
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<tr>
<td>la</td>
<td>uN</td>
<td>(12)</td>
<td>the (singular)</td>
<td>unity</td>
</tr>
<tr>
<td>la</td>
<td>plu</td>
<td>(13)</td>
<td>the (plural)</td>
<td>plurality</td>
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<td>malmultaj</td>
<td>oligo</td>
<td>(14)</td>
<td>few</td>
<td>oligarchy</td>
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<td>ĉiuj</td>
<td>pan</td>
<td>(15)</td>
<td>all</td>
<td>pan-American</td>
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<td>poly</td>
<td>(16)</td>
<td>many</td>
<td>polygon</td>
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<td>multe da</td>
<td>mega</td>
<td>(22)</td>
<td>much</td>
<td>megaphone</td>
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<td>malmulte da</td>
<td>micro</td>
<td>(23)</td>
<td>little</td>
<td>micrometer</td>
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<td>sufice da</td>
<td>satio</td>
<td>(25)</td>
<td>enough</td>
<td>satiety</td>
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<td>(e) Numerals</td>
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<td>nul</td>
<td>zero</td>
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<td>unu</td>
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<td>(34)</td>
<td>eight</td>
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<td>nonnea</td>
<td>(35)</td>
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<td>million</td>
<td>(390)</td>
<td>million</td>
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<td>hemi</td>
<td>(40)</td>
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<td>mi</td>
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<td>(1)</td>
<td>I, me</td>
<td>Mine</td>
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<tr>
<td>ci (sing.)</td>
<td>tu</td>
<td>(2)</td>
<td>you</td>
<td>et TU brute</td>
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<td>vi (plu)</td>
<td>na</td>
<td>(4)</td>
<td>we, us</td>
<td>Pater Nostra</td>
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<td>an</td>
<td>(5)</td>
<td>he, him</td>
<td>polyandry</td>
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<td>ŝi</td>
<td>fe</td>
<td>(6)</td>
<td>she, her</td>
<td>Feminism</td>
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<tr>
<td>ĝi</td>
<td>re</td>
<td>(7)</td>
<td>it</td>
<td>de re metallica¹</td>
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<tr>
<td>oni</td>
<td>pe</td>
<td>(8)</td>
<td>one</td>
<td>Person</td>
</tr>
<tr>
<td>ili</td>
<td>mu</td>
<td>(9)</td>
<td>they, them</td>
<td>multilocular</td>
</tr>
<tr>
<td>si</td>
<td>auto</td>
<td>(10)</td>
<td>oneself, etc.</td>
<td>auto-suggestion</td>
</tr>
</tbody>
</table>

¹ Famous mediaeval work on mining technology translated into Anglo-American by Hoover.
THE DESIGN OF INTERGLOSSA

II. THE ESSENTIAL GRAMMAR OF INTERGLOSSA

Since Interglossa is an isolating (analytical) language, learning Interglossa involves learning merely: (a) its etymology, i.e. mnemonic association of each vocable to an internationally current root (Chapter XI); (b) its semantics, i.e. analysis of the meaningful content of the vocables; (c) its word-order; (d) its phonetics and typography. Some preliminary, and at this stage very tentative, remarks about phonetics and typography, together with a fuller discussion of the word-order pattern, are the topic of what follows:

(a) Phonetics
The vowel symbols have the following values: a as in father; e or ae as in fête; i as in élite; o as in open; and u as in rule: y is equivalent to i. With the following exceptions, consonant symbols have their characteristic values in accordance with those of the international phonetic symbols:

- c, ch and q have the value k
- ph has the value f
- th has the value t

Initial x is z, otherwise ks.

In the following initial consonant combinations the first element is silent: ct-, gn-, mn-, pn-, ps-, pt-. Thus ps- in pseudo is equivalent to s, as in Anglo-American. The h in the combination rh is also silent. These rules admit of no inconsistencies. The inconvenience of having a few anomalies which go into a dozen lines of print is far less than the disadvantage which would result from mutilating roots beyond visual recognition. Non-Aryan-speaking people who find difficulty with compound consonants and closed syllables (as in Minding or trumpet) will find that some pigeon-holes of the semantic schema offer alternatives of the Yo-ko-ha-ma or To-ky-o type (cf. itinero travel, nesia island). All polysyllables end with a vowel. Unless the last two syllables are both vowels (-id, -ia, etc.), the stress is on the penultimate one, e.g. billEta, permIto. If the word ends with two vowels, the stress is on the antepe- nultimate» syllable, e.g. nEsia and orientAtio.
(b) Word-material

With a few exceptions the vocables of Interglossa are based on unmutilated roots of words which now belong to the vocabulary of all countries where modern technology and hygiene" have penetrated. The meaning ascribed to any one of them does not necessarily tally with the one given in a Latin or a Greek lexicon. It is the meaning suggested by the internationally current words in which it occurs. Less than a dozen are abbreviations. The origin of abbreviated ones comes in the text to assist the beginner to memorize them, partly for the reason stated in the last paragraph, and partly because of the principle of word-economy inherent in its design, Interglossa has a peculiarity which distinguishes it from other constructed languages and from many natural ones. Because they are explicit in the sense defined above, particles are relatively long words, while nouns and verbs, relieved of their former flexional accretions, are relatively short ones.¹ Strictly speaking, the terms noun, adjective and verb are not

¹ In natural languages, which are not highly inflected, prepositional and conjunctive particles, denoting relations for which clear reasoning prescribes clear-cut fields of reference, are peculiarly liable to semantic erosion; and the same is true, perhaps even more true, of the flexional appendages to which grammatical paradigms ascribe their functions. This is an inescapable limitation of Basic, or of any other form of simplified English consonant with accepted standards. As an analytical language Basic English has to exploit the use of such particles to the utmost. Hence the words on which it relies so much for sharpness of logical definition are the words most prone to idiomatic use. Peano's Interlingua suffers from a further defect. Though an isolating language, it derives its battery of directives from Latin, a language somewhat poor in its native outfit of such vocables. A constructed language of the isolating type should be especially richly equipped with directives; and its design should discourage degradation of meaning through overwork of words belonging to this class. Possibly one of several reasons for the degradation of meaning mentioned above as a universal feature of natural languages is that conjunctive and prepositional particles are usually short words. Because they are short, like flexions, we easily slur them in speech. Hence we are apt to rely on context to do their work; and by doing so, become careless about their use. If there is a grain of truth in this
applicable to any words of *Interglossa*. It is a completely isolating language. So no words have flexions characteristic of such classes in Aryan languages. If we apply the epithet *verb or adjective* to a word in *Interglossa*, we mean an *invariant* word (i.e. particle) which corresponds *in a particular context* to a particular verb or adjective in French, German or Russian. With few exceptions the same vocable also corresponds to several grammatical homosemes of any Aryan language.

(c) Parts of Speech

In all this there is nothing new to the Chinese nor to the Malay speech-community. There is scarcely anything new to anyone who speaks the Anglo-American language. A classification of *parts of speech* relevant to an isolating language will not follow the categories appropriate to the flexional system of the Aryan group. It will reflect the function of individual vocables in the sentence-landscape. From that point of view we can classify the vocables of *Interglossa* as follows:

(a) *Pseudonyms* (11). Four of these (*mi, tu, na, mu*) are *pure* pronoun-equivalents divested of any flexions. The remaining seven are of wider range *vis-a-vis* the practice of Aryan languages. They function both as pronouns and as equivalents for nouns or for corresponding adjectives. This will offer no difficulty to Scandinavians (see p. 96), nor to English-speaking people who customarily refer to a *he-goat*, and do not hesitate to answer the question: *is it a he or a she?*

(b) *Interrogative, Imperative, Negative and Comparative Particles* (6), two of which allow for question, request or command without deviation from the invariant word-pattern. Such particles are common to many languages, and we can find many corresponding periphrases in the Aryan group (e.g. French *n'est-ce pas?* and Swedish *eller hur?*)

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supposition, the moral is clear. Such words should stand out boldly in the sentence-matrix. Each Should be a challenge to the choice of the speaker and to the attention of the audience. Thus the feature mentioned above is beneficial. A long word with rich associations in a domain of exact discourse, as has (119) *postulo* for the *if* of the rejected condition, fulfils the r desideratum stated. A short word, like the equivalent *se* of Esperanto, does not do so. It has no associations of this sort.
(c) **Substantives**\(^1\). These are names for concrete things or classes of concrete things. As is increasingly true of Anglo-American (queen mother, water power, trade cycle), any one of them can replace an adjectival word-form.

(d) **Verboids** (20). These are names of processes and states. Like many so-called English verbs, any one verboid may replace a finite verb form, the corresponding abstract noun, and the appropriate epithet, i.e. adjective (cf. we love, the love of God, a love story.) This class is small. Needless to say, all verboids are invariant, but this need not surprise an Anglo-American. Our own verb must is as inflexible as a Chinese verb-equivalent.

(e) **Articles** (29). These are general words and numerals which have the function of predicating plurality or otherwise in relation to noun-equivalents, all of which are invariant like sheep.

(J) **Amplifiers** (417). The largest single class of words are abstractions, any one of which can take the place of a noun, adjective or corresponding adverb. They form natural combinations with operative verboids analogous to such Basic constructions as make clean your hearts, get wise to this, make trouble for them, give attention to me. The corresponding English word may be: (a) a directive (preposition) such as up in he went up the hill — he ascended the hill; (b) an adjectival complement, such as clean in make clean (= purify) your hearts; (c) an abstract noun, such as trouble in make trouble for others = pester or interfere with others. The student of Basic will be familiar with this class, and will not ask why some of them are equally appropriate as substitutes for abstract nouns, adverbial particles, prepositions or adjectives.

The increasing use of the rhetorical present is common to many Aryan languages, when the context or an accompanying adverb suffices to date the occurrence; and a considerable class of English verbs such, as hurt, shut, put, have no past flexion. So there should be no inherent difficulty connected with an idiom in which appropriate adverb-equivalents replace the entire flexional system of the verb. As adverb-equivalents, abstract words which are also amplifiers do: (a) all the work of the verb flexions classified as tense, aspect or mood; (b) all the work of modal auxiliaries.

---

\(^1\) Jespersen uses the term substantive in this sense for noun-adjective.
There are seventeen amplifiers which do the work of Anglo-American auxiliaries (verboid qualifiers) and as such come before the verboid.

Interglossa has no special class of prepositions. The equivalent for a preposition is an amplifier which can also do the work of an adjective, adverb and, sometimes also, of an abstract noun. The justification for the large-scale word-economy which this makes possible will come up for later discussion. A separate chapter (Chapter VI) deals with those amplifiers which can do the work of link-words (conjunctions) or preposition-equivalents if they have the appropriate (p. 109) locus in the sentence-matrix.

(d) Word-order

Word-order circumscribes the essential syntax of an isolating language such as Interglossa. The following English sentence will provide a pattern to prepare the way for what follows, and to clarify the terms used, viz., verboid, verboid qualifier, amplifier, and substantive cluster. Items (3), (4), (5), together make up the verboid cluster: "The retiring president of the society will make clear to us his reasons for resignation."

The parts are:

1. **Subject substantive cluster**. The retiring president
2. **Substantive cluster qualifying the subject**. . . of the society
3. **Verboid qualifier** will
4. **Key verboid** make
5. **Amplifier** clear
6. **Indirect Object substantive cluster** to us
7. **Direct Object substantive cluster** his reasons
8. **Substantive cluster qualifying the direct object** for resignation

This paradigm illustrates Anglo-American word-order in an affirmative simple statement or principal clause. It also reproduces the essential pattern of Interglossa in any sentence or clause. The word-order of Interglossa does not change in questions, requests, commands and relative clauses. For adequate instruction concerning its word-order we have
therefore to be more explicit about class \((b)\) in the preceding section, and to say something about the relative clause.

In spoken English we often express interrogation, without change of word-order, by tone of voice or by tacking on \(eh\) ? In some languages the use of an interrogative particle (e.g. Finnish \(ko\)) is the ordinary method of indicating interrogation, in writing as well as in speech. The English modal auxiliaries \(do\) \((do\ you\ think\ so?)\) or \(will\) \((will\ you\ give\ me\ some\ more?)\) respectively, have the same function in a question or in a request. In the same way, initial interrogative or imperative particles of \(Inter\ glossa\) indicate that what follows is a question, request, or command, without change of the invariable word-pattern. This fixed pattern is equally characteristic of subordinate clauses and simple sentences, whether affirmative, interrogative or imperative.

The beginner has to get accustomed to the trick of preserving the word-order of an equivalent simple sentence in a relative clause. This will offer no difficulty to anyone who is familiar with colloquial Anglo-American. There is a single relative pronoun \(su\) for the \(subject\). Like the English \(that\) it can stand for person or thing, singular or plural:

\[
\begin{align*}
\text{U domi ; su pre gene gravito ; habe mega paleo} & \\
& \text{The house that fell down was very old}
\end{align*}
\]

\[
\begin{align*}
\text{Un anthropi ; su pre dicte re ; non habe bio} & \\
& \text{The man who said so is dead}
\end{align*}
\]

The relative pronoun \(su\) cannot be the object of the verb, nor can it follow a preposition equivalent. When the relative pronoun is \(not\) the subject, no equivalent takes its place. We proceed precisely as in conversational English :

\[
\begin{align*}
\text{Un anthropi ; mi pre vise ; non habe bio} & \\
& \text{The man I saw is dead}
\end{align*}
\]

\[
\begin{align*}
\text{Un anthropi ; na pre dicte re ; non habe bio} & \\
& \text{The man we were talking about is dead}
\end{align*}
\]

A general formula for all types of sentence or clause is as follows :

1. Vocative cluster \((if\ present)\) followed by a colon, e.g. :

\[
\begin{align*}
\text{Na parenta in urani:} & = \text{Our father} \ (which\ art)\ \text{in heaven}
\end{align*}
\]

\[
\begin{align*}
\text{Pan proletari de geo :} & = \text{Workers of the world}
\end{align*}
\]

2. Interrogative particle \(or\) imperative particle \(or\) link-word \((if\ present)\).
(3) Subject cluster.
(4) Verboid cluster.
(5) Direct and Indirect Object clusters with accompanying qualifying clusters.

The rule of precedence with reference to the Direct and Indirect or Instrumental Object clusters is that the shorter of the two (with due regard to accompanying qualifying clusters) comes first, e.g.: -

**Fe pre dicte a mi mega longo historo**  
*She told (to) me a very long story*

**Mi date credito de bibli pan amico-pe de mi**  
*I am lending the book to all (of) my friends*

The formula given above takes no stock of the internal pattern of the clusters specified, or of qualifying expressions. The rule for phrases which qualify a substantive, whether themselves substantive clusters beginning with a preposition or clusters equivalent to a participial phrase, is the same as in Anglo-American. Unlike single words which do so, each follows the substantive it qualifies; e.g. :

**U palaeo gyna in horta**  
*The old woman in the garden*

**U gyna, mega tem apo auto anthropi**  
*A woman, separated a long while from her husband*

A substantive cluster may be made up of the following elements in the order stated, only (2) being an obligatory constituent common to all clusters :

1. **Directive** (i.e. preposition-equivalent).
2. One of the following: (a) **pronoun-equivalent**; (b) **general article** ; (c) **numeral**.
3. A **qualifier** of (4), i.e. an adverb-equivalent.
4. A **qualifier** of (5), i.e. an adjective-equivalent.
5. A **noun-equivalent,** usually a substantive as denned above.
There is no formal distinction between adjective and adverb or adjective and abstract noun. Nearly all epithets (i.e. words which can replace an Aryan, adjective) can also serve as qualifiers of other epithets (*ci. fast* in English), or as verbal qualifiers, and as the nominal equivalent of the attribute (cf. the *True* and the *Beautiful*; but no epithet can be a pronoun, as in the construction: *the good* (—good people) *die young*. The epithet as qualifier of another epithet *precedes* the word it qualifies as the epithet which qualifies the noun precedes the final substantive of the subject cluster. Where ambiguity might arise owing to absence of formal distinction between adverb and adjective, we resort to the use of plus or *syn* (and) as in the English model (*fast and sinking ship*). Here the link *and* shows that the two adjectives qualify *ship*. We thus get the following rule. If two epithets occur in juxtaposition the first is the qualifier of the second (cf. *a fast sinking ship = a ship fast sinking*); but if two epithets independently qualify the same noun-equivalent, *syn* (123) separates them.

The verboid qualifier may consist of three elements: (a) the negative particle *non*; (b) one of the three temporal particles *pre, nun, post*; (c) an amplifier which does the work of a modal auxiliary. The last (c) comes next to the key verboid, the first next to the subject cluster, e.g.:

**Mi no pre poto acte-re = I could not do so**

The general rule that any single qualifying word must immediately precede the word it qualifies admits of one exception to allow for *afterthought*. Words or expressions which qualify a sentence or clause as a whole may come at the beginning of it or at the end, as do *surely* and *a long while* in the English sentences: (a) *surely you don't mean that*; (b) *he has been staying there a long while*. The rules for clause-order are as in English, viz.:

(a) A noun clause follows the principal without a conjunction equivalent to *that*;

(b) An adverbial clause preferably precedes the principal;

(c) A relative clause immediately follows the substantive which it qualifies.

Since there is no flexion of the verboid, there is no need for special rules about the use of the verb-equivalent in or *allo obliqua*. There is no periphrastic passive—except in so far as verboid clusters formed with the operator *gene* (*become, get*) and an amplifier (e.g. *gene thermo* = *become hot* = *get heat*) are passive equivalents of verbs formed in the
same way with date (give, confer) and are therefore causative (e.g. date thermo = confer heat or heat). The only permissible impersonal expressions are those in which it (re) refers to the whole situation (e.g. re habe thermo = it is hot, or literally it has heat).

(e) Sentence-landscape

For ready recognition of the written word a language purged of flexional impedimenta can still benefit from two devices which bring into relief the component clusters of the fixed word-order pattern of Interglossa. These signposts of sentence-landscape are: (a) articles (p. 33); (b) terminals. The system of terminals is as follows:

(a) All verboids end in -e. The only other words that do so are the pseudonyms fe, pe and re (p. 82), the interrogative particle que (42) and the four prepositional amplifiers pre (72), tele (99), de (109) and vice (127).

(b) Substantives (as defined above) end in -a or -iv. Exceptions are: geo (645) for earth; cardo (740) the international term for a hinge; acu (733) for nail or pin; occlu (765) for bolt or nut, and bureau (816) for a public office.

(c) Amplifiers end in -o. Among vocables given first choice, the exceptions to this rule are the time units (anni, di, hora, etc.) and some amplifiers with prepositional values, viz.: post (71), pre (72), tem (74), ad (75), contra (78), epi (81), ex (82), extra (83), in (85), inter (86), para (94), littora (95), peri (96), tele (99), trans (101), anti (103), de (109), minus (115), per (117), plus (118), syn (123), vice (127). As with geo, etc. above, the disadvantage of mutilating a familiar international stem or of unduly lengthening the word outweighs the objection to 32 exceptions in all out of a total of 404.

Both amplifiers and verboids may be elements of a substantive cluster equivalent to an adjective or to an abstract noun. We then recognize them as such by the possessive pseudonym or the article which labels the substantive cluster as such. In accordance with the word-order rules, we have

U phobo de theo = (The) fear of God
U tene de infanti = The custody of the child

Here the empty singular article u or un (before a vowel) shows that phobo is not the complement of a verb, and that tene is not equivalent
to a verb finite. On the other hand, the combination *stimule phobo* could only mean *terrify* or *frighten*. In ninety-nine out of a hundred situations, a construction in which an -e word immediately precedes an -o word is an operative construction. These hints illustrate one class of safeguards which make it possible to *slide the same semantic element from one grammatical category to another* without undue embarrassment to the learner who is steeped in the morphological pattern of a particular language group.

Thus the word-order pattern leaves no room for doubt about whether the word *mi* means *I*, *me*, *my*. If it replaces *I* it must come near and before the key verboid, i.e. an -e word. The only words which can separate it from the latter are verboid qualifiers. If it means *me* it must come after the key verboid, and since most verb-equivalents involve an amplifier it will generally follow an -o word. If it means *my* it will replace the article of a substantive cluster of which one element is nearly always a common name, i.e. an -a or -i word.

The presence of an -o word next to the verboid (i.e. a combination of an -e word with an -o word which follows immediately after it) makes explicit the literal and metaphorical meaning of the latter. For illustrative purposes it suffices to take the triad *habe, date* and *gene*. *Habe* means *have of possess* something tangible (*habe u domi = have a house*) or some abstract property (*habe credito ex = have credit from or owe*). *Date* means *confer* or *give* something tangible (*date u bibli = give the book*) or some abstract property, in which capacity it does most of the work of the Basic operator *make* as well as that of *give*. Thus *date masso = load* is equivalent to *confer weight* or *make heavy*, and *date digito = imply* is equivalent to *give indication of*. *Gene* means *get* or *acquire* something tangible (*gene n gyna = get a wife or marry*) or an abstract property, hence to *become* (*gene melano = get blackness*, i.e. *blacken* or *become black*). The article of the direct object substantive cluster following one of these three operative verboids shows that we must interpret it in the literal sense.

*(f) Alternative Words*

The amplifiers make up the largest class of words in the essential vocabulary. For some of them and for some substantives alternative international roots are available, and the beginner can choose the one
more familiar or more easy to pronounce. The word-list of succeeding chapters offers no alternatives for pronoun-equivalents (pseudonyms) or for certain common words which most conspicuously cut across the-Aryan parts of speech. The total number of these is about a hundred, and it should be the business of the beginner to memorize them first. A few, namely uN, aD, noN, nuN eX, drop the final consonant if the next word begins with one.

(g) Punctuation and Typography

In continuous prose;—though not in our short examples cited for illustration—the substantive element of a substantive cluster begins with a capital letter, as in Danish and German print. So does a pronoun subject (e.g. mi = I), or the pronoun object of a verb or prepositional equivalent (e.g. mi = me). A pronoun used in its possessive (e.g. mi = my) sense without de (cf. de mi = my) does not begin with a capital letter. In relation to sentence structure, conventions of punctuation are specially important. The full-stop and inverted commas conform to the usual conventions. The comma marks of items of a catalogue, or participial expressions. The colon introduces a catalogue coming at the end of a sentence, or an introductory vocative expression (see p. 40). The two outstanding idiosyncrasies of Interglossa punctuation are:

(a) The end of every clause, with its own subject-"verb " complex, whether principal, subordinate or co-ordinate, is marked off from a succeeding clause of the same sentence by a semi-colon. In script the semi-colon takes the place of a conjunction equivalent to that at the beginning of a noun clause.

Causo mi volo date prospecto u gene logo de interglossa pro tu; mi pre acte grapho u bibli; plus mi esthe espero; plu pe acte lecto re.

Because I want to show you the way to learn Interglossa, I have written this book, and I hope (that) some people will read it.

(b) The hyphen binds together as units certain compounds made up of independent particles.
International Shorthand

From the time of Dalgarno and Wilkins in the seventeenth century, pioneers of language-planning have paid attention to the need for rapid transcription, and have taken a hand in shorthand projects of one sort or another. This is as it should be. Rapid transcription and economy of space or type are admittedly desiderata of an ideally designed language, though of secondary importance vis-a-vis ease of learning. It is therefore fitting to add a few words on devices which make for economical typography and copying.

Critics of Basic English make much of the fact that it is long-winded. The criticism has a measure of truth, but much less than appears from illustrations divorced from a real context. The fact is that any analytical language designed like Basic (or Interglossa) eliminates redundancies of language which do not show up in a dictionary definition. A dictionary definition of the verb swim in Basic or Interglossa has to specify the fact that the activity takes place in water. Since the Channel is a stretch of water, this part of the definition disappears when we translate the sentence: he swam the Channel yesterday. Consequently a dictionary gives a quite distorted idea of the space which a Basic or Interglossa translation takes up. By comparing the translations in Chapter XI, with the originals, the reader can verify the claim that Inter-glossa is not more space-consuming than everyday English.

The inherent antinomy between word-economy in the interests of the beginner and space-economy in the interests of those who pay for the cost of printing prompts a suggestion that those who write Interglossa should freely use internationally current ideograms, such as £, $, +(plus), - (without), ♀ (female or Venus) for she, her, ♂ (male or Mars) for he, him, his, ♀ hermaphrodite or Mercury) for one, one's, ♀ (moon), put at the beginning of a sentence or clause for the interrogative particle que, & (syn), etc. (see p. 142), as also all international abbreviations, e.g. g (gram), l (litre), m (metre), etc. We can also economize space by breaking away from the humanistic tradition which prescribes the formula one hundred and sixty-three thousand nine hundred and seventy-two for the compact ideogram 163972, and by using 0 and 1 respectively for the articles zero (no) and un (a, the).
One advantage of a language designed to achieve maximum word-economy in Ogden's sense recalls R. J. G. Dutton's Speedwords, an ingenious system of international shorthand which makes use of monosyllables in Roman script, thus cutting out the effort of learning a new and esoteric system of symbols. With 5 vowel and 20 consonant symbols we can build 100 open syllables like to or be, and 100 open monosyllables like at or up, making 205 pronounceable elements, if we add simple vowels to the list. Closed monosyllables like pat or top containing no consonant clusters add another 2,000 possibilities. Since Basic English gets along with a word-list of 850 essential items, it is clearly possible to design a language of which all the root words would be monosyllabic, like the root words of a Chinese language. A language so designed need not be compromised by a superfoetation of homophones, as in Chinese; but it could not be a language based exclusively on current international roots, many of which are polysyllables.

It follows that a language designed on the speedword principle—would not be as easy to learn for purposes of reading, writing or speaking as a language built up of unmutilated internationally current word-material. For that reason Interglossa eschews contracted forms except for 5 essential pronouns, the 2 interrogative and imperative particles, and a special class of 13 generic substantives or amplifiers (pp. 97-105) which enter into large groups of compounds. The last-named have alternative full forms. At the same time, a language of which all the essential vocables do not exceed 900 is well adapted to make use of the Button principle for note-taking and other purposes for which economy of space and speed of transcription are specially important. It is possible to represent each vocable of Interglossa by a distinct monosyllable based on the initial letters or bisyllable made up of not more than* four letters, keeping the average length of a word to 2-6 letters. It would not be possible to do the same thing with a natural language—other than Basic English—because too many of the combinations of less than 4 initial letters would have to be the same. A casual glance at any page of a dictionary suffices to prove this.

Since each pigeon-hole in the 880-item semantic schema has its appropriate number, it is possible to communicate with a code of ten symbols, i.e. the Arabic numerals, without using more than three consecutive symbols for each word. Thus, dispatched fifty kilograms wheat last month
is: 464. 31.26.38. 717. 625. 72. 68. This involves recourse to half as many symbols from a keyboard with less than half as many items.
THE DESIGN OF INTERGLOSSA

III. THE SYSTEM OF OPERATORS

Subject and Object

To define rules of word-order (p. 34) we need reference points: Two reference points in what has gone before have been subject and object. The use of these terms calls for comment to forestall a charge of inconsistency. Some people still cherish the delusion that subject and object are categories of semantic relations in contradistinction to categories of flexional change. For instance, Esperantists1 tell us that we need an accusative terminal to distinguish the object, as if a generic conception of object could arise in a language free from case-flexion or case-postpositions like those of Japanese. This is a legacy of classical misconceptions concerning the semantic credentials of grammatical habits of particular—more especially Aryan—speech-communities. What state we can legitimately predicate as a property of a given subject and what process can have a given substantive as its proper agent or as its rightful goal depend on the particular state or process under discussion. In other words, what we call subject and what we call object depend on the meaning of the particular verb with which two given substantives (or their pronoun substitutes) labelled as such are associated. The highest common factor of semantic content in appropriate subjects of all verbs is zero; and the same is true of all objects of all verbs.

Partisans assert that the flexions of Esperanto permit members of different speech-communities to communicate without departure from native word-order. It is difficult to reconcile this pretension with the difficulties of translating a long German sentence when the meaning of the words is apparent. German should be an easy language for an 1 The resistance some people put up against lucid discussion concerning the semantic credentials of nineteenth-century grammatical "rules" is hardly surprising, when we recall how many generations of schoolboys have been caned into acquiescence with their patent absurdities. It is a little humiliating for, people past forty to discover in later life that the rigours of the school climate have left them with a weakened constitution. Modern educational practice has abandoned the pretence that the grammar of the grammar school has much "relevance to English in its present form, still less to international syntax; and Esperantists are now among
the last supporters of pedagogic superstitions which still flourished in the naughty 'nineties.

Englishman or American to learn, because of the large stock of roots it shares with our own language. The fact is that English-speaking people learn German with difficulty. Its wealth of flexions certainly does not make the task of the beginner easier; but the most formidable obstacle is unfamiliarity with the arrangement of words.

If anyone who reads these pages is not clear about the issue stated in the preceding paragraphs, a few examples should suffice to dispel the belief that any common thread of meaning runs through the subject-object distinction. That nothing of the sort exists is sufficiently evident if we consider verb-couplets which have a reciprocal relation, e.g. *stimulate* and *respond*. Thus X (subject) *reacts to* Y, means the same as Y (subject) *stimulates* X. In fact the logical, as distinct from the grammatical, status of the *subject* depends on the progress of knowledge. If the eye emits light, as Plato taught, the logical relations of subject and object are the same in the two following statements: (a) *I see the flash*, (b) *I strike the table*. In both of them the speaker-subject is the Platonic agent, and the so-called object is the goal or victim of the process. The fact that photography is possible shows that Plato was wrong. So it is clear that the *flash* (grammatical object) is the agent (logical subject) of the first statement. This is not an isolated case. Whether we identify the grammatical subject of affective verbs such as *love* or *wish* with the agent of the process described by these words depends on whether we cling to traditional idealistic views about cognition and sentiment or whether we prefer to anticipate a more strictly behaviourist attitude. If we define the logical subject as the *agent* of a process, a solipsist view of the world prescribe that the logical is also the grammatical subject of: *I remember, I remember the house where I was born*. The behaviourist view, which is also that of the practical man or woman, prescribes that the *house* is the agent which initiates the type of cerebral activity called *memory*.

What we choose to call subject and object from a grammatical point of view thus depends on the grammatical apparatus of the language under discussion. In our own, we can use *they* and *them* as litmus paper. That is to say, the category of words which *they* can replace defines the subject class. In the sentence *they respond to them*, *they* can refer only to the things or persons stimulated, never to the stimulus. We have thus a class
of verbs in which the grammatical subject of a process or action is what gets the stimulus. We also have a class of verbs (e.g. excite, stimulate) of which the grammatical subject is the stimulus itself, a class of verbs of which the grammatical subject is the person who applies the stimulus (whip, cut), and a class of verbs of which the grammatical subject may be either stimulus or person who applies it (prick, -sting). Such verbs stand for processes; and if we include verbs which stand for states we can distinguish many other categories by what classes of substantives can play the role of grammatical subject.

It is not justifiable to use the terms subject and object as reference points of international syntax unless we can define them without recourse to grammatical tricks peculiar to particular languages. Happily, as Ogden has seen, we can sidestep the difficulty by keeping down the number of verb-equivalents; and it is the object of this chapter to clarify the rules of word-order given on p. 35 by making the meaning of subject and object explicit with reference to each verboid. Interglossa has 20 verboids of which one, ge, is an operative particle based on gene (473), and one eque (469) stands for the so-called verb be when be links what follows with the subject and an identity or a specification of the class to which it belongs (Roosevelt is the right man; Victoria was then Queen of England; elephants are mammals). Otherwise habe (have) does the work of be; and is the universal copula connecting subject (i.e. topic) and its attribute (he has strength = he is strong).

We have already examined the meaning of habe (474), gene (473) and date (466) in outline. Two operators, (477) (481) perde (lose) and tracte . . . apo (take . . . away), in combination with an amplifier respectively do the work of gene and date in combination with its opposite. We have seen that date thermo and gene thermo respectively mean to heat or warm in a transitive (confer heat on) and intransitive or reflexive (get heat) sense. Similarly tracte thermo apo (take heat away from) and perde thermo (lose heat) respectively mean to cool in a transitive or intransitive (reflexive) sense. Negative opposites such as no-thermo also have their own type of comparison. Thus we have thermo—major thermo (hot—hotter) and no-thermo—minor thermo (cool —cooler). From one amplifier we can thus build up a double series of verbal and adjectival forms; such as:
Thus gene and perde form with amplifiers intransitive equivalents of causative verbs based on date and tracte. apo. The intransitive equivalent may correspond to a single English verb form, or merely to a passive construction. Thus with rugo (rough, coarse) we have:

\[
\begin{align*}
\text{date rugo } & = \text{roughen } X, \text{ coarsen } X \text{ (tr.)} \\
\text{tracte rugo apo } X & = \text{smooth } X \\
\text{gene rugo} & = \text{get rough, coarsen} \text{ (intr.)} \\
\text{perde rugo} & = \text{get smooth}
\end{align*}
\]

When we resolve the verbal system of an Aryan language into a system of operators and complementary abstractions, as in Basic English, the conventional distinction between transitive and intransitive wears thin. According to text-book definitions, the room is the object of the "transitive" verb leave in he leaves the room, but the object of the preposition outside when we substitute the "intransitive" verb go in the semantic identity he goes outside the room. Thus what we call transitive or intransitive merely depends on whether we have to insert a preposition between a verb and a substantive cluster which follows it. By this token we can speak of the construction make clean in make clean your hearts as transitive, and give trouble in give trouble to others as intransitive. In what follows we shall speak of: (a) a transitive verboid, if it does not require an amplifier equivalent to a preposition to link it to a substantive cluster which comes immediately after it; (b) a transitive operator when the combination of verboid and postposited amplifier does not require the insertion of a preposition-equivalent in the same position. In this sense perde and gene are transitive verboids but intransitive operators. They cannot take an object without intervention of a preposition-equivalent; but the triple combination may do the work of a simple English verb form. Thus from credito (loan) we have:

\[
\text{date credito Y de Z} = \text{lend } Y \text{ (some) } Z
\]
habe credito ex Y = owe Y (— have a loan from Y)
gene credito ex Y = borrow (= get a loan from Y)

To state that date is a transitive operator is therefore another way of saying that we do not translate on in the construction: the subject (X) confers the abstract property denoted by the amplifier on the object (Y), i.e. we interpret date thermo X as confer heat on X. The territory of date as an operator is reserved for verb-equivalents which signify conferring a state or passive attribute. When an amplifier implies execution of a process, including performance of a human action, acte (do, perform, carry out) usually takes its place as a transitive operator; and either gene or habe do for the passive construction. Thus with scholo {instruction} we have:

acte scholo Y de Z = teach Y about Z
gene scholo de Z = learn Z, study Z (= get instruction about Z)
gene scholo ex Y = be taught by Y (= get instruction from Y)

Thus the formula for acte couplets is: X performs the action on Y. If an amplifier stands for an action (33) and its product, we can use either date or acte; e.g. with vesto (covering) we can use:

acte vesto Y = cover Y  date vesto Y = cover Y

For the special class of verbs which signify acts of human communication, we can always replace (464) acte by (468) dicte (say, tell, express) as a transitive operator in the sense define^ above. The formula is: X communicates the message to Y.

Thus with monito (counsel, advice, warning) we have:

dicte monito Y = warn Y, advise Y
gene (or gene) monito ex Y = be warned by Y, be advised by Y

In conformity with the rule of priority (p. 36) the analytical resolution of verbs prescribed above involves a departure from the customary English word-order, as illustrated by the use of the qualifier mega (much, big):

gene mega credito ex Y = borrow heavily from Y (i.e. get a big loan from Y)
date mega credito Y = lend Y a lot

In the last it would be equally consistent with the transitive use of date as an operator—though longer—to say:

date credito Y de mega re — give a loan of much to Y

This would be the normal construction when there are two objects:
date credito YdeZ = lend Z to Y

In an operative construction (480) tene (keep, conserve) is also transitive, i.e. a tene amplifier couplet signifies conserving the state specified by the amplifier on behalf of Y (the object which follows):

\[ \text{tene immuno}\! Y = \text{guard } Y, \text{ protect } Y \text{ (keep } Y \text{ safe) } \]

The domain of the transitive operator detecte (find, discover) is investigatory operations. If A stands for an abstract noun-equivalent of an amplifier, a (467) detecte couplet has the meaning: discover the A of Y (the object), e.g.:

\[ \text{detecte fabrico } Y = \text{analyse } Y \text{ (find the composition of } Y) \]
\[ \text{detecte sequo } Y = \text{deduce from } Y \text{ (find the result of } Y) \]

The formula for the transitive operator (479) stimule (excite, evoke, stimulate, call forth) is: evoke the reaction A from Y. Thus with philo (love) and cholo (anger) we have:

\[ \text{stimule philo } Y = \text{endear oneself to } Y \]
\[ \text{stimule mega cholo } Y = \text{infuriate } Y \]

When the accompanying amplifier signifies a physical process or reaction, the corresponding intransitive construction is an acte couplet. The transitive operator (470) esthe (feel, experience) combines with amplifiers which signify sentiment or personal states, and the appropriate formula is feel A towards Y, e.g.:

\[ \text{esthe philo } Y = \text{love } Y \]
\[ \text{esthe penito } Y = \text{regret } Y \]
\[ \text{esthe cholo } Y = \text{be } .\text{angry with } Y \]

The operator (478) reacte (react to, respond to) forms transitive couplets for which the formula is respond to the A of Y, e.g.:

\[ \text{reacte flavoro } Y = \text{taste } Y \]
\[ \text{reacte impero } Y = \text{obey } Y \]
\[ \text{reacte odoro } Y = \text{smell } Y \]
\[ \text{reacte questio } Y = \text{answer } Y \]

Three motive operators, with tracte, form a class apart. Kine (475), which is intransitive, means move, go, come, and is the basis of a large class of verbs such as ascend, enter, mount, depart. Mote (476) is its transitive counterpart signifying shift, move and put. Balle (465) signifies dispatch, send, cast, throw. All these are verb coenosemes of which the complementary coenosemes are equivalent to adverbial prepositions. Thus with extra (outside) and apo (away) we get:

\[ \text{balle } Y \text{ extra } = \text{eject } Y, \text{ extrude } Y \]
mote Y in = insert Y
tracte Y apo Z = extract Y from Z

The remaining verboids (471) facte (make, construct); (463) acouste (hear); (482) vise (see) form only a few-amplifier couplets. Facte requires a material thing or collective as its object and is not at all comparable to the Basic English operator make. Constructions with facte and its material object do, however, cover the meaning of many Aryan verbs:

facte u texti = weave (make a fabric)
facte u domi = build (make a house)

From what has gone before it follows that the meaning we give the terms direct and indirect object depends on whether we are using a verboid literally (without an amplifier) or operatively (with a postposited amplifier). As used literally, we may summarise our use of the terms subject and object as in the table below. The particle a(d) always precedes the indirect object.

<table>
<thead>
<tr>
<th>Verboid</th>
<th>Subject</th>
<th>Direct Object</th>
<th>Indirect Object (preceded by a(d))</th>
</tr>
</thead>
<tbody>
<tr>
<td>acouste</td>
<td>hearer</td>
<td>stimulus</td>
<td></td>
</tr>
<tr>
<td>acte</td>
<td>performer</td>
<td>performance</td>
<td>victim</td>
</tr>
<tr>
<td>balle</td>
<td>motive agent-sender</td>
<td>what is moved</td>
<td>destination</td>
</tr>
<tr>
<td>date</td>
<td>giver</td>
<td>what is given</td>
<td>recipient</td>
</tr>
<tr>
<td>detecte</td>
<td>finder</td>
<td>what is found</td>
<td></td>
</tr>
<tr>
<td>dicte</td>
<td>speaker</td>
<td>what is said</td>
<td>audience</td>
</tr>
<tr>
<td>esthe</td>
<td>person</td>
<td></td>
<td></td>
</tr>
<tr>
<td>facte</td>
<td>maker</td>
<td>product</td>
<td></td>
</tr>
<tr>
<td>gene</td>
<td>receiver</td>
<td>acquisition</td>
<td></td>
</tr>
<tr>
<td>habe</td>
<td>possessor</td>
<td>what is possessed</td>
<td></td>
</tr>
<tr>
<td>kine</td>
<td>mover</td>
<td></td>
<td></td>
</tr>
<tr>
<td>mote</td>
<td>motive agent-mover</td>
<td>what is moved</td>
<td>destination</td>
</tr>
<tr>
<td>perde</td>
<td>loser</td>
<td>what is lost</td>
<td></td>
</tr>
<tr>
<td>reacte</td>
<td>what reacts</td>
<td>stimulus</td>
<td></td>
</tr>
<tr>
<td>stimule</td>
<td>exciting agent</td>
<td>response</td>
<td></td>
</tr>
<tr>
<td>tene</td>
<td>keeper</td>
<td>what is kept</td>
<td></td>
</tr>
<tr>
<td>tracte</td>
<td>motive agent-remover</td>
<td>what is removed</td>
<td></td>
</tr>
<tr>
<td>vise</td>
<td>seer</td>
<td>stimulus</td>
<td></td>
</tr>
</tbody>
</table>
Operative couplets as listed below do not take an indirect object preceded by a(d). The indirect object of the equivalent Aryan verb is a word preceded by pro (on behalf of), anti (against), or the empty particle de (with respect to). The following table, in which X is subject and Y object summarizes operative constructions with amplifiers.

| Xacte AY | X performs the action A on Y |
| X date A Y | X confers the attribute A on Y |
| X detecte AY | X discovers the property A of Y |
| XdicteAY | X conveys the communication A to Y |
| X esthe A Y | X experiences the sentiment A towards Y |
| X gene A EX Y | X acquires the attribute A from Y |
| X habe A DE Y | X has the attribute A in relation to Y |
| X perde A CAUSO Y | X loses the attribute A because of Y |
| X reacte A Y | X responds to the stimulus A applied by Y |
| X stimule A Y | X evokes the response A from Y |
| X tene A Y | X conserves the attribute A on behalf of Y |
| X tracte A apo Y | X withdraws the attribute A from Y |

This pattern is generally applicable, but gene may take anti for ex before the object, e.g.:

gene victo anti Y = conquer Y, vanquish Y (get victory against Y)

Tense

Like other words of Interglossa, verboids have no flexions. Independently mobile vocables do the work of tense flexion, where necessary. The equivalence of temporal auxiliaries and adverbial particles is evident if we compare the English sentences: (i) I have hurt myself; (ii) I did hurt myself; (iii) I previously hurt myself. The usage of Interglossa follows the last plan. The essential rules are as follows:

(i) If the context does not sufficiently date the occurrence or condition as before (pre), now (nun), or afterwards (post), the particles pre, nun(n), and post, placed immediately in front of the key verboid, label the time as past, present, or future respectively, e.g.:
Mi no nun acte re = I am not doing so (at present)
Mi no pre acte re = I did not do so, I have not done so
Mi no post acte re = I shall not do so
I am not going to do so

(ii) If the context sufficiently dates the occurrence or state, ho preposited particle is necessary. Any other time-indicator takes up the usual position of a particle which qualifies the sentence or clause as a whole, i.e. at the beginning or end of it,

eg. :
Mi non acte re post-di — I shall not do so to-morrow
Mi non acte re pre-mensi— I did not do so last month

(iii) If we want to indicate what was over at some past date (perfected action or state), we use pre before the key verboid in addition to the other temporal qualifier, e.g. :

Mi no pre acte re pre-di = I had not done so yesterday

(iv) If we want to indicate action or state completed before some future date, we put pre in front of the qualifier : Mi no acte re pre post-di = I shall not have, done so to-morrow (i.e. I do not do so before to-morrow)

Thus post (72) before the key verboid does the work of shall, will, be going to. Pre (73) does the work of have or did (or of the simple past flexion) when the sentence contains no other qualifier to date the occurrence as past. If such a qualifier is present, it has the force of had. Either way, its presence in front of the key verboid makes the action or state antecedent to the implicit present or explicit past.

Constructions Equivalent to the Infinitive

Since all verboids of Interglossa are also abstract nouns, all infinitive constructions other than those which involve an auxiliary (e.g. shall, will, should, would, let, may, must, can) are nominal constructions, and the accompanying article labels them as such. Three situations arise :

(i) The simple gerund or verb-noun is straightforward because the infinitive (or the -ing derivative) of the English verb is always a homoseme of the corresponding noun-abstract. Accordingly its equivalent has the
article u(n) or the empty associative particle de as signpost of sentence-landscape:

U facte u satio eu inter-natio glossa non habe facilo
It is not easy to construct a satisfactory international language

Mi esthe espero de vise tu
I hope to see you

(ii) The purposive infinitive, i.e. when to signifies in order to, involves tender u(n) (with a view to a), for to in this context, e.g.:

Mi pre kine topo tender un acte re
I went there in order to do so

(in) Either tender u(n) alone or (u metodo) de (a method for) may mean the same as how to, and we have the analogous constructions chron u when to, and loco u or topo u where to:

An dicte a mi u metodo de facte re
He told me how to make it An dicte a mi chron u facte re He told me when to make it

(iv) The so-called accusative-infinitive construction means the same as a construction involving the possessive pronoun and the gerund (-ing form). The pronoun-equivalent replaces the article of (i) and (ii) above and is "possessive" by juxtaposition:

Mi dicte petitio an acte re
I asked him to do it (I requested his doing it)

Briefly, the rule is that u(n) or de before an operator is equivalent to the empty word to (German zu, Swedish att, French a), and tender u is equivalent to in order to (German urn zu, Swedish for att). As above, a pronoun in its possessive sense may replace the article u(n). Hence the possessive gerund construction and the accusative-infinitive are both indistinguishable from a noun clause, as when we say in English:

I saw he did it I saw him doing it
I know he is right I know him to be right

Participial Usage

Since a verboid has no flexion, date means give, gives or giving, and we can use it (or any other verboid) as an adjective-equivalent, i.e. as the present active participle.
In contradistinction to participial expressions, including operative constructions with an amplifier, the simple verboid as epithet takes the usual position:

**U kine dactyli acte grapho**
The moving finger writes

Unlike Russian and the Scandinavian languages, English, German and French have no separate active and passive participial forms for the past. As adjectives, the present and past participles are respectively active and passive. In fact, the so-called past (more properly, passive) participle need not have a past meaning (cf. it is easily broken). Thus pre date (mve) does not mean given. As a postposited epithet pre date could mean having given, which is the correct equivalent of a true active past participle, e.g.:

**Un avi, pre kine apo**
The bird, having moved away

Passive constructions of Interglossa involve the operator gene (get, tfecome), and the literal equivalent of an English past participle used as an adjective is usually the combination pre gene with an amplifier. Pre date thermo means has heated, having heated, or simply heated as finite verb-equivalent; and pre gene thermo means was heated, has been heated, or simply heated as a postposited adjectival participle equivalent to a relative clause beginning with su (su pre gene thermo = that was heated). To avoid periphrasis and to provide for occasional constructions involving a simple verboid as a passive participle, Interglossa has a passive particle: (472) ge = that has got.
Ge is equivalent to su pre gene. Placed in front of an amplifier, the couplet has the force of a passive participle or equivalent relative clause. Being relatively short, a ge-couplet can take the initial position:

\[
\begin{align*}
  u \text{ ge baro gasi} & = a \text{ compressed gas} \\
  u \text{ ge stereo haema} & = c\text{lotted blood} \\
  u \text{ ge dicte verba} & = \text{the spoken word}
\end{align*}
\]

The first two have the same meaning as:

\[
\begin{align*}
  u \text{ gasi, (su) pre gene baro} \\
  u \text{ haema, (su) pre gene stereo}
\end{align*}
\]

**Comparison of Basic and Interglossa Operators**

The range and use of some of the operators of Basic and Interglossa agree closely. Acte, gene, tene, correspond to do, get, keep. The transitive mote is roughly the same as put. The English verb take can mean to carry (acte phoro), but otherwise corresponds closely to tracte. The idiomatic vagaries of give and make as alternative causative operators (cf. give X trouble and make X cold) disappear, because facte mea\(^*\) is make only when equivalent to construct or manufacture. Similarly, the redundant or meaningless distinction between come and go disappears. Both merge in kine. The inconsistencies due to overlap of the territories of have and be do not crop up, because eque expresses nothing more than identity or class membership in contradistinction to existence (habe accido), living (habe bio) or the possession of any other abstract property (e.g. habe thermo).

Of operators which have no prototype in Basic, esthe, stimule, reacte and perde correspond closely to the usage of English verbs (experience, evoke, heed, lose) with extensive operative value. Thus dying is losing one's life; fading is losing colour; wilting is losing moisture; leaking (of a tyre) is losing air, being discouraged is losing hope. In short, the idiom of the operative system, while free from inevitable ambiguities and redundancies of accepted English usage, is in step with the evolution of the Aryan verb pattern.

**The Next Step.**

By now the reader has all rules essential for writing and speaking Interglossa, or for translating Interglossa into the home language. If prepared to make the effort of being quite clear about the meaning of
what he or she has to say, all that remains for the beginner is to master the list of essential vocables alphabetically arranged on pp. 249-256. Our next chapter is a heuristic intermission. It will show how anyone who has reached the Higher School certificate level in England, or has graduated from a junior college in America, can get over this hurdle in a few days, or at worst a fortnight. In an explanatory context, a single continuous narrative introduces Anglo-American or internationally current words containing one or other of each root used as a basis for word-material, with an appropriate reference number directing the reader to the corresponding vocable in Part II.\(^1\)

The qualification in the last paragraph calls for comment as a prelude to later chapters. In America, where Ogden's work has borne abundant fruit, the culture value of semantics is widely recognized. That one might be clear about what one means before one says or writes it, is a suggestion which will not necessarily offend the susceptibilities of the American reader. Before a British audience, an author needs to be more wary. Those who advocate linguistic education as a training for the mind have taken every possible precaution to prevent their pupils from thinking about what they do. A tradition of language-teaching which derives from medieval primers of Latin and Greek has perfected a system which every well-bred Briton expects to do its duty in a language text-book for which he pays cash down on the counter.

It first presents the purchaser with a prospectus of grammatical paradigms as a prophylactic against the shock which the nervous system would sustain if we had to face at the outset the all-pervading verbal irregularities and ubiquitous semantic inconsistencies inherent in the structure of any natural language. After a protracted period of immunization by this technique, we are permitted to learn that there are regrettable anomalies in the otherwise orderly pattern of natural discourse. We are then invited to commit to memory a prescribed number of admittedly untidy odds and ends, called idioms. We note with a little pang that we cannot pair off all the bits and pieces in the semantic and morphological rag-bag called the verb *to be* with all the bits and pieces in the morphological and semantic rag-bag spelt as *etre*. Happily, the discovery does not

\(^1\) Twenty supplementary items (861–880), added during completion of the last draft of the 8,000-word dictionary to avoid recourse to long-winded constructions, do not appear in this chapter; but relevant associations occur in the mnemotechnic notes on pp. 256-282.
undermine the discipline of our sturdy island race. Having learned to label tricks of discourse with 'unitary epithets, such as the subjunctive mood or the accusative case, we are confirmed in the delusion that verbal collocations so described necessarily have a one-to-one congruence of meaning in two different languages. The naked truth is that one and the same interjection of this species may describe a dozen or more semantic entities in either of them.

Once indoctrinated with this nonsense; we cannot hope to learn any language designed in conformity with consistent semantic principles, unless we are willing to relearn the language or languages we already speak, and to unlearn everything that the old-school-tie masters have taught us. At some stage or other most potential readers of this book have been more or less permanently disabled by the nonsense taught as grammar in all British schools and many American ones. So it is not possible to justify the credentials of Interglossa to any considerable public without filling up many pages with an autopsy on grammatical misconceptions we embraced in our youth or adolescence. That is why Part II has to be long. That is why it is inevitably a little forbidding. An author who hopes to win recognition for new principles of language design has to overcome the superstitions of the sophisticated before he can hope to cash in on the common-sense of the common man.

That the treatment of the semantics of the vocables in Part II has to be long, and has to be a little forbidding, does not mean that Interglossa demands intellectual exploits of which only highly educated people are capable. The very opposite is true. Simple people who have never been initiated into the idiocies of grammatical classifications current in college textbooks have nothing to unlearn. If this book were written for children, or exclusively for adults who have never studied a foreign language in the usual way, the plan of it would be entirely different. As it is, the author has to state his case to an audience with preconceptions that few adults have yet outgrown. It is true that Jespersen's teaching and Ogden's writings have begun to bear fruit in a younger generation fresh from English and American, though not as yet from Scottish, schools and colleges. It is true that some schools have replaced a method of language-teaching which led to confused thinking by the direct method which prohibits any sort of thinking whatever. Still, people under thirty years of age who have not grown up to identify the Aryan tenses with scientific chronometiy are not so numerous as to encourage a businesslike publisher
to put a popular price on a brochure for their benefit. The fanaticism
with which Esperantists cling to grammatical thaumaturgies, of which
the semantic pretensions were long ago debunked by comparatively
conservative philologists, shows that few, even among those in the
forefront of the international auxiliary language movement, are yet abreast
of the new semantic ideas which Ogden and others have contributed to
contemporary enlightenment.

THE DESIGN OF INTERGLOSSA

IV. HEURISTIC INTERMISSION

Interglossa §7) (509) is not -for misanthropes (306) (810) and misogynists (306) (834), nor for plutocrats (367) (826) and zoophilists (630) (355), who have more concern for the comfort of marsupials (684) than for mortality (312) among miners (651) babies. Its function (111) is to lubricate (166) (340) intercourse (87) (204) between democratic (19s) (826) nations (317), to catalyse (166) and stimulate (479) communal (180) acfiow (464) for a higher warm (325) of sanitation (405), to arm (811) us for militant (303) and energetic (214) campaign against pauperism in an age of potential (137) plenitude (365). Its use would help to immunise (264) us against that unnatural fear of aliens (149) which Mr. Wells calls xenophobia (149) (356); and to canalise (636) the impulse to persecute (332) into planning (303) plenty (365) on a planetary scale.

Assuredly (155), we must first remove the causes (104) of war. We have to put human need above the claims of capitalistic (817) investment (270) and in front of the pecuniary (348) privileges (372) of particular persons (7) or classes (821) of persons. Along with the old system (433) of private profit (374), imperial (836) arrogance (154) must make way for more liberal (282) esteem of the potentialities (137) of oppressed (332) colonial (822) peoples. Freely tf/ected (210) assemblies will take over the authority (153) of viceroys (127) (849), and monopolistic (27) companies(825) will make way for public (380) committees' (824) with commissaries (823) responsible to the people. When we are morally (132) mature (299) enough to adopt or to (108) Interglossa to this end, free insurance

(269) premiums (371) will be the birthright of every (835). There will be no rentier (850) and no proletariat (845). University (858) education
will be free to all. An international police system will seem as natural- as our international service with its world-wide distribution of telegrams and trans-maritime telephone connexions. A world ripe for use of a constructed auxiliary would regard cleptomania as a euphemism for the banking system of to-day; and would tolerate any which is not antagonistic to amicable relations between world citizens.

Propaganda against the credit system as it now is has certainly no connexion with our main task. The latter is no sinecure. Let us forget the turbulent times ahead, and stick to our agenda. A satisfactory world-auxiliary cannot limit its appeal to the confines of Christendom. It must not frustrate the hopes of myriads in the Orient by perpetuating local and unnecessary intricacies of Occidental accidence. More reciprocity between east and west is imperative. So the grammar of Interglossa is as elementary as possible. Separate words mark what many languages express by a multitude of final syllables. Thus no endings distinguish the noun-equivalent as subject (11), accusative or dative case-forms, nor the verb as past or present. We distinguish unity and plurality of the former or the temporal relations—predated or postdated—of the latter by words which, like all words of Interglossa, are immutable and invariant. Thus learning Interglossa is merely learning the use of each item of its verbal stock-in-trade.

What most facilitates learning is the source of its word-material. Interglossa profits by the impact of science on daily speech during the hdi-century since Zamenhof put forward Esperanto. Every vocable of Interglossa is a brick taken from some internationally current word such as periscope, chronometer, megaphone, telegram, micrometer, ballistics, autocracy, kinema, or. Thus the meanings of microscope, micrometer, microphone, and microbe tell us that micro means small(ness). So learning Interglossa is learning semantics and etymology hand-in-hand. Where the beginner cannot detect the semantic of an item, the pedagogue can bring school biology, geography, geometry hand-in-hand. Where the beginner cannot detect the semantic of an item, the pedagogue can bring school biology, geography, geometry hand-in-hand.
(114) and chemistry or names of inventions and proprietary (847) products to his aid. In this way, learning its vocabulary (459) is getting more familiar with an existing international language of navigation (764), horticulture (647) (192), agriculture (631) (192), astronomy (633) (324), meteorology (638) (289), and manufacture (471).

The source of these words makes things as easy for an older generation with a classical orientation (334) as for the adolescent imbibing (160) the scientific attitude (334). The nonagenarian (35) has the consolation (184) of knowing that he was flagellated (233) through the mazes of Mediterranean grammar to some purpose; and the modern child with no pretensions to humane (262) learning will be none the worse for meeting a few old tags such as quo vadis? (24), pro bono publico (120) (380), mutatis mutandis (314), in camera (86) (47), habeas corpus (474) (440), vice versa (127) (126), in vino Veritas (702) (452), lapsus linguae (276) and per ardua ad astra (117) (76) (633). The claim that it is possible (136) to plan (363) a language of which we do not need to learn the vocabulary (459) has the flavour (234) of thaumaturgy (305) (214); and would have provoked the derision (400) of Zamenhof’s first disciples (828), at a time when Esperanto (130) was a truly hopeful venture. Yet cursory (206) perusal of these pages furnishes satisfactory (25) (471) and ocular (526) evidence (158) for its verity (452) at the risk of a little reiteration (272). The author petitions (41) the reader to be his jury (275), and to award a verdict after critical (188) examination (219) of the data (827).

On pp. 56-62 italics distinguish words built out of good international (87) (317) bricks. By comparison (106) of words which share the same international roots, we can detect (467) the semantic (413) value (449) of the vocables (459) of Interglossa; and every necessary (133) vocable of Interglossa comes in some word included within the limits (286) of this chapter (818). If you take the trouble to dissect (412) them, you will make a more noteworthy discovery than that of the Bourgeois Gentil-homme (589). You have been talking good Interglossa (87) (509) prose (848) since you reached years of maturity (299). With a little cerebration (492) you may even become one of the pioneer poets (841) of the new language. Still, you need not dissipate (202) effort on mere artistry (812), if your aim is to be expert (222) in a communal (181) medium for technical (222) or political (842) communication (181). You can get an easy victory (454) over all too frequent (238) inhibitions (268) by sticking to the
elementary (212) formula (831) which follows. With the help of Webster’s or the Concise Oxford Dictionary (468) and some technical glossary such as Beadnall's Dictionary of Scientific Terms in the Thinker's Library, fill up the fugitive (242) moments of your leisure by tracking down the source and meaning of every italicized word in this chapter (818). You can get as much sport (425) out of a dictionary (468) as you can extract (83) (480) from fiction about espionage (217) in the dark epochs of military (303) violence (455) before instruments (51) of pacific (340) intercourse (87) (206) paved the way for an international (87) (317) auxiliary.

This is the strategy (430). From what is common to communal (181) and communication (181) in the last paragraph (94) (250), you get the notion of community (181) of intercourse, sentiment or property (847) in the word communo with the terminal -O common to all abstract words of Interglossa.

But if you can do this with communication or communal, you can do the same with aerodrome (146) (206), dromedary (206) and hippodrome (206). The first is the house and runway of an aeroplane (146) or dirigible (185), i.e. controlled (185) airship with gas (796) bag, usually filled with helium (646), an element first known to exist because of its lines in the sun's spectrum (662). A dromedary(206) is a first-rate runner. A hippodrome is a place where horses run around for the diversion of harassed hedonists (131). Hippo- is not on the word-list. We use the Latin root of the zoological (630) (289) genus (18) present in equine (578), or (even worse) equitation (578) ; but since we have now tamed hippo- we may as well use it for the next stage of our itinerary (273). This is a visit (457) to Mesopotamia (92) (659) by way of Hippopotamus (659). Thence we can proceed with a confessedly (183) anterior (77) motive, but retrogressive (97) motion (476), to the Mesozoic (92) (630) age. Our course (206) is then clear. Here are specimens (424) to demonstrate (199) how we can pair off words with common international roots :

protozoa (139) (650), protogynous (139) (834), misogynist (306) (834), misanthrope (306) (810), philanthropy (355) (810), anemo-philous (152) (355), anemometer (152) (114), hydrometer (263) (114), hydrography (203) (250), photography (359) (250), photometer (359) (114), cyclometer (712) (114), bicycle (28) (712), bigamy (28) (244), monogamy (27) (244), monogram (27) (833), telegram (99) (833), telescope (99) (411), periscope
To get the best out of the detective (467) method (302), we can put everyday words in contraposition (80) to more exotic ones with a common root, e.g. neuralgia (525) (148) and analgesic (525). Among everyday words which are self-explicit, we have: solitude (20), zero (26), question (42 and 24), non-aggression (43) (455), textile (57), vase (58), vesture or divest (59) duration (64), syncarpous (123) (566), syndactylism (123) (500), Polydactyly (16) (500), Polynesia (16) (654), Micronesia (23) (654), microscope (23) (411), bioscope (161) (411), biology (161) (289), cytology (499) (289), phagocyte (353) (499), phytophagous (604) (353), epiphyte (82) (604), epigynous (82) (834), polygyny (16) (834), polymerism (16) (19), isomerism (44) (19), stereoisomerism (428) (44) (19), stereoscopic (427) (411) . . .

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(305), mix (307), admonition and monitory (309), mordant (310), narcotic (316), negotiations (320), innocuous and nocuous (322), nomination (323), nullify and acquit, quittance (326), odour and aromatic (329), offer (330), ordinal rank (333), papilla and projection (342), parallel (343), paralyse (344), penitence (350), penal (351), pneumonia, pneumatic and respiration (369), proposal (376), protest (378), perforate (383), quality (385), rape and rapacious (386), razor, erase and talon (388), reflect (391), religion (392), reparations and repair (393) > idolatry and mariolatry (396), which we can pair off with hagiolatry (256) (396) and hagiography (256) (250) to break the monotony (27) (439) of so many commonplace words in a line (287), rigidity and rigor mortis (399), sadism (402), salutation (404), serial and series (415), severe (416), signify (417), society and social (419), solemn (422), sophistication, sophistry and philosophy (422) (355), soporific and insomnia (423), symptomatic (432), testimony (435), sepsis, septicaemia and antiseptic (440), antitoxin (103) (440), typography and typewriter (444), umbrage and penumbra (445), uniformity (446), reunion (447), vacuum and vacant (448), vapour (450), vendor (451), virus and virulent (456), vivacious and vivisection (458) (412), vulnerable (461), anaesthesia and aesthete (470), genesis (472 and 473), perdition (477), tenure and tenacious (479), proprietor and proprioceptive (847).

It would be an error (215) of teaching technique to concentrate on easy words. A little excogitation (178) is an aid to memory (308), and our job will be less dreary if we tempt fortune (236) by deliberate divination (203). So the reader should not protest (378) if some of our italicized words are unusual, like cynosure (548) or callisthenics (196), archaic like clavichord (742), or technical (222) like the cleidoic ovum (743) (532). The quaint connexion between the caudal (548), appendage of the constellation and the cynosure (548) of every eye in the theatre firmly fixes (232) ura (547) for future reference. The link between the verb to be as copula (746) and the process of coitus (179) will be self-evident when sex education is more general. The new book of genesis (473) inverts (126) the story of the Fall. When land began to rise, a cleidoic (743) egg was necessary to forestall desiccation (200). Fertilization (228) had to predate (73) deposition of a protective shell. External insemination was no longer possible, and sex dimorphism (311) became a necessary (133) precondition (73) (107) of parental (840) recognition.
The discussion of such themes is still apt to evoke generalized cyanosis among our male Blimps, and facial erythaema among our more elderly female relatives; but we shall soon learn to talk about the inconvenience of the menses, the problems of the menopause, and the secretion of the luteal cells of the ovary, as we now talk about any other sanitary issue. Coito and fæci are essential words of Interglossa, because coitus and defecation are inescapable events of human existence. Oddly enough, we can discuss the totally unnecessary diversion of osculation without traumatic consequences to our neighbours. We can expel mucus from the nares without offence, if we produce the prescribed scrap of nasal linen. With or without a pocket handkerchief, lacrimal secretion is permissible, alike in the pulpit and in the boudoir.

The technician will have the key to most essential words; but politics contributes to the common pool. When the Duce chose the Roman fasces as ensign of the fascist movement, his followers stood self-confessed as a bunch of thugs. Goebbels and Mussolini's gladiators first familiarized decent people with the meaning of coprophilia. Travelling has its own repertoire—via, Cook's wagons lits, taxis, museums, helicopters, and valuta are words in world-wide use. The same is very nearly true of billet, the French word for ticket. Commerce has distributed cigars, cigarettes, petroleum, razor blades, bombs, spirits, soups, coffee, cacao beans, coconuts, herrings, sardines, tobacco, daffodil bulbs, leguminous crops and apiary appliances on all five continents. From music we get fortissimo as a signal of intensity; from the stage proscenium and recess; from poetry the lyric—no longer for the harp—and Hesper for the evening star; from the modern novel ectogenesis or extra-uterine development of the embryo; from sculpture the Roman toga and the crucifixion, from military jargon the pontoon; from architecture we get portals, balconies, columns, Acropolis and viaduct; from shop windows tunics and lamps; from engineering, tubes, piston, and axis; from hospital reports we get dental caries, clinicians with
the bedside manner, and cranial (497) surgery. From almost any newspaper we can cull something about pulmonary (538) tuberculosis, secretarial (853) appointments and other jobs for sedentary (691) workers.

It would be a facile (224) task to design a game like dominoes, each counter a keyword, having two internationally current roots. We can make a start by assembling a battery of vocables (459) in groups which share one or other of certain highly fertile (228) roots, e.g.

theology (436) (289), geology (645) (289), pathology (347) (289), aetiology (147) (289), zoology (630) (289), ecology (209) (289), limnology (626) (289), chronology (62) (28*9), helminthology (626) (289), parasitology (345) (289), palaeontology (341) (289), toxicology (440) (289), neurology (525) (289), cytology (499) (289), gynaecology (834) (289), anthropology (810) (289), osteology (529) (2894, meteorology (638) (289), climatology (638) (289).

teography (645) (250), cosmography (640) (250), bibliography (814) (250), demography (198) (250), cartography (637) (250), telegraphy (99) (250), hydrography (263) (250), palaeography (341) (250), photography (359) (250), lithography (52) (250), oceanography, (657) (250), graphite (250).

megaphone (22) (357), microphone (23) (357), telephone (99) (357); gramophone (833) (357) or phonograph (357) (250, dictaphone (468) (357), homophone (113) (357), phonetics (357).

photometer (359) (114), stalagmometer (426) (114), micrometer (23) (114), manometer (297) (114), gasometer (786) (114), cyclometer 0 (712) (114), bathometer (159) (114), anemometer (152) (114), nephelometer (656) (114), chronometer (62) (114).

hydrophobia (263) (356), claustrophobia (175) (356), xenophobia (149) (356)/ photophobia (359) (356).

polygamy (16) (244), bigamy (28) (244), monogamy (27) (244), cleistogamy (105) (244), gamete (244).

autocratic (9) (826), democratic (198) (826), plutocratic (367) (826), bureaucratic (816) (826).

telescope (99) (411), microscope (23) (411), periscope (96) (411), bioscope (161) (411).
monarchy (27) (153), heptarchy (33) (153), autarchy (9) (153), oligarchy (14) (153), tetrarch (30) (153).

telegram (99) (833), pictogram (362) (833), cryptogram (190) (833), phonogram (357) (833), epigram (822) (833).

agronomy (631) (324), bionomics (161)' (324), astronomy (633) (324), antinomy (103) (324), antinomian (103) (324), economics (204) (324)-

anemophilous (152) (355), zoophilist (630) (355), philanthropist (355) (810), hydrophilous (263) (355).

gastritis (506), nephritis (524), neuritis (525), otitis (531), enteritis (503), dermatitis (502), cystitis (498), arthritis (484).


Memorizing (308) derivations of disconnected words is not a stimulating (478) pursuit. We can break down a pardonable (346) resistance (395) to any such prospect (377) by capitalizing (817) the residues (394) of our scholastic (409) exploits. Here are a few specimens (424) of the way in which we can, make mnemonics (308), i.e. aids to memory (308). From school-mathematics we have all learned the meaning of plus (118) and minus (115), of summation (431) and division (204), of product (373) and ratio (389), of minutes (69) and seconds (74) of a degree. We get our numerals (327) from bisection (28) (412), triangle (29), tetrahedron (30), pentagon (31) (248), hexagon (32) (248), heptagon (33) (248), octagon (34) (248), decametre (36) (791), centimetre (37) (719), kilometre (38) (719). We have all learned to balance equations (212). We have all met pyramids (725), cylinders (713), cones (709), prisms (723); cubes (711), quadrilaterals (726) (89), trapezia (700), and other solid (429) or plane, curvilinear (193) (287) or rectilinear (390) (287) figures. We have all traced the locus (53) of a point rotating (770) about a centre (706) like a speck on the periphery (96) of a wheel. We all know that equiangular (468) triangles (29) are not necessarily (133) congruent (108). If We have gone a little way with co-ordinate geometry, we know that the catenary (741) is the curve of a chain attached loosely by each end at the same level.
High-school (409) chemistry introduces us to crystalline (793) and amorphous (703) (311) types of materials (54), to isomorphic (44) (311) and to heteromorphic (259) (311) crystals (793). We learn that the graphite (250) of our pencils and diamonds of our cutting tools are allotropic (101) (442) forms of the same element (212), carbon (788). We get a nodding acquaintance with hydrogen (263), oxygen (144), with the halogens (797), chlorine (171) and iodine (271), with the metallic (799) elements (212) whose symbols Ag (786), Au (787), (806), Pb (803), are speedwords for their Interglossa equivalents (469) (450). We meet a host of pure (382) compounds, alkalis, acids (784), and such salts as cupric sulphate (794) (807), sodium citrate (570), which stops the curdling of milk, and prussian blue which is a ferricyanide (795) (195). As we all know, rust is simply formation of ferric (795) oxide (338). Another oxidation (338) compound is silica (661). The last named has a crystalline (793) allotrope (102) (442) abundant in nature as quartz, the chief ingredient of sand. Its natural amorphous (703) allotrope (102) (442) is opal. When heated to a suitable temperature, which we can measure with a pyrometer (384) (114)', silica undergoes vitrification (808), Vitreous (808) silica is the quartz glass used for manufacture (471) of lenses. Silicates (661), such as water glass, yield a colloidal (791) solution (421) of silicic acid (784), when treated with stronger acids, and subsequently separated from the latter by dialysis (293). If sufficiently concentrated, the dialysed (293) solution is liable (332) to turn into a gel (683).

Dialysis (293), which means separation by diffusion through a membrane, recalls hydrolysis (263) (293) or separation of parts by action (464) of water in presence of a catalyst (166) to lubricate (166) or assist the reaction (478). Hydrolysis itself recalls dehydration (263) or chemical desiccation (200). If we do not go deeply into physical (361) chemistry, which deals with states of matter, we shall give the cryohydric (189) (263) point the go-by. Even so, we come across the snow-white mineral cryolite (189) in connexion with the manufacture (471) of aluminium. In any high-school course, we are also sure to get the low-down on soft and hard water. That means getting to know a little about saponification (804)—a long word for soap-making—and hence about such soap fats as stearin (520) of lard or olein (686) of olive oil.

The odds are we pick up a few crumbs about optically active (143) substances such as sugars, e.g. dextrose (81) or glucose (247), the laevose (88) in honey and the lactose (517) in milk. The principle of the saccha-
rimeter (690) (114) depends on the rotation (770) of polarized light rightwards by dextro-rotary (81) (770) or leftwards by laevo-rotary (88) (770) sugars. If we get so far with the study of stereoisomerism (428) (44) (19) we cannot miss a few words about Pasteur's pioneer work on sarcolactic (539) (517) acid (784). Pasteur also elucidated the work of the saprophytic (407) (604) yeast fungi and the role of the vinegar (702) bacillus (737). Production of butyric (672) acid (784) in rancid butter is also due to bacteria or, as some biologists (161) (289) call them, schizomycetes (408). The lipoid (520) butyrin (672) and the protein caseinogen (677) are the two chief solid (428) constituents of milk. Casein (677) derived from the second is now the basis of a well-known plastic (802), but most plastics are polymers (16) (19) of much simpler ingredients such as urea (549) present in urine (549).

We now meet such words as lipoids (520) in articles about dietetics (354) in. women's gazettes (832) and housekeeping journals (832). Even the culinary (191) art has taken the same road as chemistry. The modern kitchen has thermostatic (437) (427) controls (185) ; and we make our confectionery (680) in vessels of aluminium or pyrex (384), i.e. fireproof, glass. We cook to the music (313) of the radio (386), or to its meteorological (638) (289) forecasts which have tuned our ears to cyclones (712) and anticyclones (103) (712). Isotherms (44) (437) and isobars (44) (157) are no longer formidable names for lines joining places with the same thermometer (437) (114) and barometer (157) (114) readings. Television (99) (482) sets will soon be as commonplace in the kitchen as cauliflowers (567), potatoes (608), tomatoes (624), oranges (598) and tea (696) caddies. More science (852) rightly applied means less fatigue (226) for the domestic (48) worker.

In short, machinery (760) leaves more time for philoprogenitive (120) (355) (245) pursuits. To be forewarned against poliomyelitis (246) is to be forearmed ; but infant (835) welfare now (71) embraces more than pediatrics (349). The new (321) parent (840) will welcome the hour (67) of homework as an occasion (328) for self-improvement by co-operation with the family (829). If the theme (857) is physics (361), there are many verbal (860) pitfalls to avoid. We have to be clear about what is grocer's weight or mass (297) as opposed to the pull of a weight on an elastic (751) filament (50), such as the helicoid (258) spring of a spring balance, because of the tension (434) exerted by bodies falling under gravity (252), the earth's attraction (481). Another semantic (413) source of trouble is
the distinction between displacement speed or velocity (169) and ordinary speed relative to the path traversed. Acceleration (169) is increased velocity (169).

With Science for the Citizen as her ally, the history conscious (260) parent (840) can help the child to picture (362) the beginnings of kinematics (475) by lively illustrations from ballistics (464) when artillery (735) was in its infancy (835), or from horology (67) (289) when the pendulum (116) was a novelty. From school physics, our international (87) (317) units (12) of work, the erg (214) ; of force, the dyne (208) ; of volume (460) or capacity (460), the litre (718); of length, the metre (719); and of mass (298), the gram (716), help us out with some more items of our word-list. In hydro-mechanics (263) (55) we learn about the siphon (418) and about the manometer (297) (114) or pressure-gauge for measuring the rarefaction of gases (796). In acoustics (463) we hear about audible (463) vibrations (453) and pure tones (439). In optics we use the photometer (359) (114). We meet photosensitive (359) (414) substances for the manufacture (471) of panchromatic (15) (174) plates. We learn about the infra-red (85) and ultra-violet (99) radiations (386) beyond the visible (482) spectrum (662). In electromagnetism (211) (295) we use the rheostat (397) (427) to stabilize (232) the resistance (395) of a circuit and condensers to produce oscillatory (453) discharges.

Electrical discharge recalls the Aurora Borealis (787) (79), or northern lights. Geography (645) (250) is the softest job for the normal (325) parent (840) who wishes to stimulate (478) (830) reverence (396). Valley (667), tunnel (664), channel (636), plateau (364), continent (639) and 6«y (635) are words of daily speech, like the less translucently (101) (291) international (87) (317) couplet mountain (652)—fountain (644) ; and a harbour is an asylum (634) for ships. No one forgets the frigid (240) and the torrid zones (60) of the hemispheres (40) (730) ; nor that Micronesia {23) (654), Melanesia (300) (654), Polynesia (16) (654) are island groups in the ocean (657) comically (180) miscalled Pacific (340). And here we may remind ourselves that punning is the art (812) oi extracting (83) (481) humour from homophones (113) (357). But we have not finished with geography (645) (250) if we leave out climate (638) and instruments (51) for measuring it, thermometer (437) (114) or heat-gauge, barometer (157) (114) or pressure-gauge, and nephelometer (656) (114) or cloud-gauge, bathometer (159) or oceanic bathos (159) gauge, pluviometer (368) (114) or rain-gauge, and anemometer (152)
or wind-gauge. Nor should we neglect demography in these days of declining fertility in rural as well as urban localities.

Geography is not mere topography. It is the offspring of cartography and geodesy. These in turn are children of astronomy-The zodiacal constellations which lie about the plane of the ecliptic inclined at about 23½° to that of the equinoctial are a happy hunting-ground for our tendentious narrative. We take over Gemini, Scorpio, Leo, Virgo and Libra as they stand, and adapt Pisces, Cancer, Sagittarius in conformity with our rules. The constellations of Ursa Major and Ursa Minor also come in handy for grammatical comparison. We get our latitude from the altitude of a star at what the mariner calls its southing, i.e. transit across the celestial meridian. We are all familiar with the Galilean drama of the competing geocentric (645) and heliocentric (646) cosmogonies. So the modern parent knows that the earth is supposed to be a gyroscope with a diurnal cycle, flattened at the poles by its own centrifugal action. Too many of us are a little nebulous about the pros and cons for our credo; and far too few of us know how Huygens first inferred it from the retardation of the pendulum, as set forth in his famous book, the Horologium oscillatorium.

Publication of the last named antedated by nearly two Centuries detection of the annual parallax of any star, and hence also the demonstration of the second Copernican postulate. At this point, the bibliophile has a look in. Such landmarks of the history of science as Huygens' book are vocal. De Re Metallica of Agricola, De Revolutionibus of Copernicus, De Fabrica Humani Corporis of Vesalius, Motibus Stella Martis of Kepler, furnish us with an arsenal of verbal missiles.

The pacifically minded parent will not treat homework on history as a national affair. We have to teach our children to envisage history as a cosmic sequence, the naturae or ladder of nature.
Like Mr. Wells, we should therefore begin with the strata (693) which form successive shelves of the earth's laminated (757) crust. The beginning is then a story (260) of erosion and flooding, of banked-up detritus (642) and alluvial (632) deposits. We see life emerging on land in the steaming swamps of the Carboniferous (788), leaving its indelible footprints on the anthracite (785) slabs we burn for fuel. Reptiles such as the wedge-toothed lizard Sphenodon (776), now the lone New Zealand survivor of its group, supplant the salamanders. In the Cretaceous (792) or chalk age, life takes to the air. Already there are creatures of a truly Avine (557) pattern alongside the Pterodactyls (537) (500). Contemporary (75) with them are small plantigrade (249) mammals; but the great bipedal (28) (533) reptiles still held hegemony (206) on the dry surface of the earth, when the thunder lizard Brontosaurus (163) was alive, Came the Eocene (65), dawn of modern mammals: small pachyderms (339) (502), digitigrade (110) ungulates (547), tree-shrew forbears of our Simian (618) grandparents. The Pliocene signalizes (774) the arrival of the ape-man Pithecanthropus (810) and Sinanthropus (819). True Hominidae (600), including Eoanthropus (65) (810), the Piltdown Man, are a Pleistocene by-product. Human beings emerge, talkative creatures with tools; but there is little promise (375) of machinery (760) in their first instruments (51), the eoliths (65) (52).

Palaeolithic (341) (52) man is already an artist (812). He has left behind the orifice (528) of his cave residences (205) immortal mural (721) pictures, mostly of animals, his ovine (599), bovine (558), feline (580) and canine (564) victims and friends; but he has not turned his back on food-gathering and hunting. Cultivation (192) of arable (734) areas is the achievement of the Neolithic (321) (52) revolution. The woman now plasters a reticulum (769) of sticks with clay. She shapes a vessel. She fashions bricks and weaves fabrics. The ceramic (707) and textile (57) industries (837) have begun. Homo sapiens (590) (406) is no more a migrant, but a creature with a fixed (232) domicile (48), master species (424) of an ecological (205) (289) system (433) unique in the record of living beings. With more stabilized (232) seasonal mores (132), grain-growing man adapts (108) a makeshift calendar of lunations (649) to the exigencies of settled agriculture (631) (192). He has to record events. Out of a medley of calendrical logograms (289) (833) and pictograms (362) (833) the craft of writing comes to birth. The natal (318) hour of human history (260) is the beginning of an annual (61)
timetable based (158) on the heliacal (646) rising of the dog star. It is now (71) a short step to the sun calendar of the heliolithic (646) (52) culture (192) and the ceremonial (168) incantations (164) with which its priestly custodians drill the cultivators (192) of the soil into acquiescence.

The Megaliths (22) (52) were observation posts of the priestly astrologers (633) (289) and monuments of tribal celebration (168). Then as now, my-making (315) and praxis (370) strove for mastery; as strive they must till experiment (219) becomes the arbiter (274) of fantasy (314) and its minister (304). The myth-makers (315) made themselves a hierarchy (153), the bureaucrats (816) (826) of a theocracy (436) (826), which reduced their fellows to servitude (258); and helots (258) toil in the sun to fashion the ornate (335) sarcophagus (539) (353) of a regal (849) corpse or to decorate (193) the limbs of his uranian (665) consort. While the medicine men trepanned (749) the skull to make a port-hole for the spirits and embalmed the body in a futile attempt to forestall necrosis (319), myriads (39) of common people rotted with parasitic (345) diseases which modern science (852) has eliminated.

We need not traverse a dreary record of coronations (681) inscribed on tombstones and papyri (800). Let us cull some items from school biology (161) (289). From what we learn about the circulation of the blood, we know that the venous (p. 219) flow from the lungs enters the left auricle and passes out by the great arterial (p. 219) trunk called the aorta, to the rest of the body. To do so, it has to traverse the two flaps of the ventricular septum (721), called the mitral (685) valve on account of their likeness to a bishop's hat. We also learn that the blood is not a homogeneous (113) (18) fluid. It contains red corpuscles, the erythrocytes (216) (499) which hold the haemoglobin (512), in contradistinction to the white corpuscles or leucocytes (281) (499). Some of the latter, the phagocytes (353) (499) can eat up bacteria. They grasp them by means of pseudopodia (379) (435), like the pond animalcule Amoeba.

The human ear is a gold mine (651). In part, it is a geotactic (645), in part an acoustical (463) receptor (414). The former consists of the utriculus with its three semicircular canals at right angles, each with a flask-like ampulla (669) at one end. The utricular sac contains a calcareous statolith (427) (52), the displacement of which from its position of rest stimulates (479) different receptive (414) cells, and semaphores (413) (358) our space relations to the brain. The essential part of the auditory
The organ is the sacculus (671). The sacculus of mammals has a coiled portion, the cochlea (570), reminiscent of a snail’s shell. It contains a membrane sensitive to acoustic oscillations (453). The auditory and utricular sacs (671) are embedded in a bony capsule (819), the periotic (96) (531). The fluid of its cavity (167) has two membranous windows, the fenestra rotunda (714) and the fenestra ovale (714). Into the latter fits the stirrup bone or stapes (777), innermost of three ear ossicles which transmit (101) to it vibrations (452) from the ear-drum or tympanum (780), when sounds impinge on the latter. The other two ear ossicles are the median anvil bone or incus (756) and the outermost hammer-bone, or malleus (761).

Elementary study of heredity introduces us to phenotypes (135) or genetically different individuals which seem alike, as opposed to genotypes (18) which are genetically similar, i.e. have the same hereditary make-up. From elementary genetics (215) we learn that gametes (244) have the haploid (212) as opposed to the diploid number of chromosomes in the fertilized egg or zygote (462) formed from their union. In genetics we meet homozygotes (113) (462), or pure-bred individuals formed from union of like gametes, and heterozygotes (259) (462), or hybrids formed from union of dissimilar ones. The old Teutonic word sib (854) is now the international term for brothers or sisters without discrimination with respect to sex. Plants and some animals which can propagate by gemmation (162) or budding are not dependent on sexual reproduction. The other root for a bud comes into many embryological terms, e.g. the blastoderm (162) (502) or plate-like embryonic area we see as a pink spot on the yolk of a fertile egg, when we crack one for frying.

Most terms for parts of the body correspond to adjectival forms we meet in any elementary text-book of human anatomy or animal biology, e.g. abdominal (483), brachial (485), buccal (486), epicanthial (488)—see p. 306 cardiac (489), carpal (490), cephalic (491), costal (496), cervical (493), glandular (496), gastric (506), glenoid (508), gluteal or pygeal (510), haemal (511), hepatic (513), labial (515), renal (524), oesophageal (527), pelvic or coxal (534), sudorific (542), tarsal (543), thoracic (545), villi (544). Two names are based on corresponding bones, the calcaneum (487) or heel-bone, and the scapula. (535) or shoulder-blade. One occurs in the myoneural junction, where the terminal dendrites (576) of the nerve axon (736) branch like a tree trunk in the muscle fibre.
The old term vermes for worm-like animals contributes a root to the vermiform (626) appendix, more shortly (and usually) the appendix of appendicitis. The capillomotor (546) (476) nerves to the muscle fibres of a cat's hair come into action when there is a dog about. Capillomotor shares the same root as capillary (546) tubes with a hair-like bore. Somatic (541) is the technical equivalent of bodily, and turns up in chromosome (174) (541), the name for cell bodies which stain deeply with basic dyes. Keratin (514) or horn protein is present in the epidermal (82) (502) cells of our own skin, and forms a waterproof layer, like the waxy substance suberin (620) of cork and of the epidermal cells of leaves. After removal of the natural fat lanolin (518), sheep's wool is almost pure keratin (514). Trichina (546), the hair-like thread-worm which produces muscle trichinosis, shares the same root as atrichous (545), i.e. bald. The chondrocranium (495) (497) is the cartilaginous skull of the embryo or new-born babe. Thelin (544) is the name of the female hormone which brings about growth of the nipples; and a bicornuate (28) (514) uterus (550) is a two-horned womb, such as that of a cow, a cat or a cart-horse.

Both plant and animal anatomy introduce us to many descriptive epithets for shapes and textures. Such are: glaucous (250) for stem or leaf surfaces with a greyish bloom, eriophyllous (518) (603) and laniferous (518) for woolliness of leaf or stem, rugose (401) for roughness or coarseness to the touch, campanulate (676) for bell-shaped petals, plicate (366) for folded parts, pinnate (535) or feathery leaves like those of the mimosa, lanceolate (758) or spear-like ones, spatulate (775) like a spoon or spatula of the chemical balance, and sagittate (771) like an arrow. We meet falciform (752) processes, hook-shaped like a falcon's beak, and pyriform (610) projections (342), shaped like a pear.

The flower with its calyx (675), often cup-like, its corolla, its andrecium (4) or male parts and its gynecium (834) (205), i.e. pistil or female (5) residence (205), furnish a fresh set. The ovule (532) has a minute hole, the micropyle (23) (383), in its seed-coat or testa (697). Through it the pollen tube makes its way to the ovum (532) contained in the megaspore (22). Some ovules are orthotropous (336) (442), with the micropyle (23) (383) turned vertically above the stalk. More usually they are anatropous (442), with the micropyle (23) (383) beside the stalk. Some flowers, like the lily, are hypogynous (85) (834), with the corolla below the womanly part. Others, like the daffodil, are epigynous (82) (834), having the petals on and apparently supported by the ovary. Some flowers, like delphiniums,
have *apocarpous* (78) (566) pistils with *carpals* (566) apart from one another. Others, like the narcissus, are *syncarpous* (123) (566), having the fruit parts fused together. Of such, some may be *schizocarpous* (408) (566), like the geranium, of which the *carpals* split apart when the fruit is *mature* (299).

Nutrition may be *holozoic* (21) (630) if wholly dependent on fresh organic material, *saprophytic* (407) (604) if the diet is decaying organic matter, and *holophytic* (21) (604) if wholly peculiar to green plants, which alone are capable of *photosynthesis* (359). Mosses absorb water necessary for *photosynthesis* (359) by means of their *rhizoids* (613), i.e. rootlets. *Photosynthesis* depends on the absorption of light by the green leaf pigment *chlorophyll* (171) (603) which occurs along with a yellow colouring matter, *xanthophyll* (292) (603), mainly in the middle part of the leaf, or *mesophyll* (91) (603). *Chlorophyll* uses light to manufacture *carbohydrate* (788) (262) from water and *carbon dioxide* in the air. In daylight the *mesophyll* (91) (603) is rich in starch grains, broken down into sugar during darkness by an enzyme called *amylase*. Saliva also contains an *amylolytic* (670) (293) enzyme, i.e. one separating starch into sugar. The insalivated and juicy food in the stomach itself is called *chyme* (569), based on a root which occurs in *parenchyma*, the juicy pith of a plant. Animals have no pigments which they can use, as plants use *chlorophyll* (171) (603) for *photosynthesis* (359); but many animals have pigment cells with *ramifying* (611) processes in the skin, and the migration of colouring matter in these branching processes brings about the colour changes for which the chameleon is proverbial. Such pigment cells may carry black pigment, as do the *melanophores* (300) (358), yellow pigment as do the *xanthophores* (292) (358), and red pigments as do the *erythrophores* (216) (358).

We can work in a host of items by means of a short synopsis of living creatures containing no terms outside a high-school biology syllabus. Before we put the modern *systerna* (434) naturae on the *tapis* (695) or *magic* (294) carpet of our *mnemo-technic* (308) (222) ingenuity, let us sidestep any *occasion* (328) for *disputatious* (201) *persons* (7) to *question* (42 and 24) the *credibility* (187) of our claims or to charge us with a *pseudo-simplicity* (379) which would leave a *stigma* (429) on an otherwise spotless record. The *onus* (331) of convincing *critics* (188) is on ourselves, and we concede a few items, admittedly based on association. Thus a doll is a three-dimensional example of *mimicry* (762); and the words
"each" and "every" are *singular* (17) substitutes for "all." A saw has teeth but needs no *dentist* (cf. 749 and 501) to extract them. The business of a *burr* (Amer.) or *nut* (Brit.) is to get its hole *occluded* (765) by the screw it fixes (232); and a bill is a *note* (839) our *computed* (839) expenses. Plates are usually *disc-like* (750). An oath in court is a legal *sacrament* (851); and the *skeleton* (729) is the framework which gives the body of a *vertebrate* its characteristic form. When man first dug ditches to drain the fields, he became a *fossorial* (715) mammal, but by that time he had learned two tricks no other mammals can perform. He could cover the *pudenda* (381) with a loin-cloth, and could construct the sort of *mobile* (22) property we call furniture.

Our pronouns *mi* (1), *tu* (2) and *na* (3) are frankly based on Aryan models (pp. 81-82); but the first two will offer no difficulty to a Finn, and the third will get by with anyone who speaks Tamil. *Mi* (1) also happens to mean *me* and *my* in the Yoruba language of Western Nigeria, where the preposited present particle *n'* does the same job as our own *pan-Aryan* (15) word *now* (71) and its *Interglossa* equivalent. Our *pen* (767) or *pencil* has next to cope with an unlucky thirteen based on *international* roots outside the scope of high-school teaching; and the author would accept any offers (330) of substitutes with *gratitude* (251).

Fortunately three of the thirteen have synonyms with which the Anglo-American will find no difficulty. We have no good international roots for bread or cake. Though the *placenta* (688) or *afterbirth* comes from the Latin word for a cake, its associations are not tasty; and though the Concise Oxford and Webster's both give *panification* (687) for bread-making, no *normally* (322) constituted person uses such a word. Only a pedant would say *veliferous* (783) for sail-bearing; but this root is common in names for floating animals with sail-like devices, e.g. the widely distributed *pelagic* *hydrozoon* (263) (630) *velella* (783), and the *veliger larva* of many molluscs. The word for a well is based on a root which occurs in names of animals which live in wells, e.g. the aberrant shrimp *phreatocus* (658), but few of them get into school text-books. The word for a club comes from a root present in names of animals with club-like tentacles, including a family of polyps, the *Corynidae* (747) with many genera whose names, e.g. *Syncoryne* (123) (747), also share it. *Psammophilous* (661) (355) plants prefer sandy soil, and the root occurs in names of denizens of the sand dunes. *Tyroglyphe* (664) is the generic name for the mites which *tunnel* (664) in cheese. It has a root
common to the *siphonoglyph* (418) (664), or ciliated tunnel on either side of the gullet of a sea-anemone or coral.

An adolescent who has made a hobby of entomology will have met *scute* (772) as the name for the dorsal shield of chitin on the segments of an insect’s body, and *furca* (753) for the forked tails of some insects, e.g. earwigs. In medical terminology a *ricula* (671) is a little purse of liquid under the skin and *capsella bursa pastoris* (671) is the international name for shepherd's purse. *Rhabdites* (612), *rhabdoliths* (612) (52) and *rhabdoms* (612) are names for little glassy sticks in the *epidermal* (82) (502) cells of free-living *Platyhelminthes* (364) (626), i.e. flat worms, or the outer wall of sponges. *Thecodont* (619) teeth are teeth, like our own, with roots in a bony box or socket. *Thecate* (620) is a descriptive term for animals with a box-like covering, and the *hydrotheca* (263) (620) is the little box which protects the aquatic *zooid* (630) of a colonial polyp. A *pulvillus* or *pulvinus* (689) is a little cushion often found at the base of the leaf stalk of plants. *Vecci* (782) is the least happy choice in our word-list; and the best *mnemonic* (308) the author can offer is that a lever is a device for getting displacement differences through the same *vectorial* (782) angle.

We shall now show where *Homo sapiens* (590) (406) stands in the *scala naturae* (729) by finishing a *discursive* (206) narrative with a table of *international technical* terms for the common *classes* (821) and orders of living creatures. All these terms, being truly international, are assimilable with or without change in conformity with the rules given on pp. 238-241.

A. **Protista**—*micro-organisms* (23),

I. *CYANOphyceae* (194), (blue algae).

II. *SCHIZOmycetes* (410), (bacteria or *microbes*).

III. *SporoZOA* (630), parasitic forms including the malarial organism.

IV. *Ciliata* or *Infusoria*, ciliated motile forms—the largest *micro-organisms*, e.g. *Paramoecium*.

V. *FLAGELLata* (233), so-called because they move by a whip-like *flagellum* (233), includes the sleeping-sickness parasite *Trypano-
soma, and the free-living CHOANOflagellata (678) with
collar of cuticle round base of flagellum.

VI. RHIZOPODA (613) (536), moving by root-like processes of
body, e.g. Amoeba.

*Note.*—The usual name for III–VI inclusive is: Protozoa (139)
(630).

B. Plants or PHYTA (604).

(i) CRYPTOGRAMS (190) (244), flowerless plants.

I. ALGAe—seaweeds.

(a) CHLOROphyceae (171), green algae of pond water.

(b) RHODOphyceae (398), pink algae.

(c) PHAEOphyceae (352) brown algae, e.g. bladder wrack.

II. Fungi.

(a) ASCOMycetes (669), with flask-like spore vessels, e.g.
witches' broom and ergot or rye.

(b) Phycomycetes, moulds.

(c) Basidiomycetes, mushrooms.

III. BRYOPHYTA (559) (604), mosses and liverworts.

IV. PteridoPHYTA, (604).

(a) EQUIsetales (578), horsetails.

(b) FILICales (579), ferns.

(c) Lycopodiales, club mosses.

(ii) PHANEROGAMS (354) (244) or SPER-MAPHYTA
(619) (604)—seed-bearing plants with manifest sexual
process.

V. GymnoSPERMS (619), cycads and conifers (573).

VI, ANGIOSPERMS (175) (619), flowering plants with closed seed
vessels.

*Note.*—All our edible plants, as also Nicotiana (623) the tobacco
plant, are Angiosperms. Flowering plants are likewise the source of our
plant foods and plant filaments (50) used for textiles (57). Thus the Graminaceae (587) or grass family includes all our cereals, the names of which are based on the international generic (18) terms, e.g. *zea* (maize), *oryza* (rice), *hordeum* (591), *triticum* (625), *secale* (616), *panica* (600), and *avena* (oats). After separation of the seed from the glume (585) by winnowing, we grind the grain to make the flour of our farinaceous (645) foods. Our legumes, based either on the generic name as with *pisum* (605) or on the full binomial epithet as with *vicia faha* (579). The squash family *Cucurbitaceae* (574) is the basis of another item. The names of the three filaments of importance are based on the generic terms *gossypium* (586), *linum* (595) and *cannabis* (562). The *pome* (607) is the botanical name for an apple-like fruit. Other fruit names depend on generic or binomial epithets: to be found in the international flora (582). *Amygdalis* (552) is the almond genus, and *Amygdalus persica* is the specific name of the peach (601) assigned to this genus. *Phoenix* (602), *Prunus* (609) and *Pyrus* (610) are generic names, as are *vitis* (629) and *ficus* (622). The synonym of the last name is (622) based on the Greek root in *sycophant* (see p. 318).

C. Animals or Zoë (630). I. Porifera, sponges.

II. Coelenterata (167) (503), so-called because the single body cavity is also the gut.

(a) *HYDROZOA* (263) (630), polyps, hydroids, *zoophytes* (630) (604).

(b) *Scyphozoa*, jelly fishes.

(c) *Actinozoa*, sea-anemones, corals.

(d) *CTENOPHORA* (748) (358), comb jellies, so-called from comb-like bands of ciliated cells they carry.

III. Echinodermata (551) (502).

(a) *ASTEROIDEA* (633), star fishes. (h) *ECHINOIDEA* (551), sea-urchins, so-called because of their spines.

IV. ROTIFera (770), wheel animalcules of pond-water.

V. NemathELMINTHES (626).

(a) *Nematoda*, thread-worms.
(b) Acaïathocephala (551) (491), hook-headed parasitic (345) worms.

VI. PLATYHELMINTHES (364) (626).
(a) Turbellaria, non-parasitic (43) (345)/ flat worms.
(b) Trematoda, flukes.
(c) Cestoda, tape-worms.

VII. Molluscoidea.
(a) POLYZOA (16) (630), or BRYOZOA (559) (630), sea-mats, called the first because colonial, the second because the colonies may look moss-like.
(b) BRACHIPODA (485) (536), lamp shells.

VIII. Annelida.
(a) OLIGochaeta (14), earthworms—with few bristles of setae (773).
(b) Hirudinea, leeches, segmented worms with no setae (773).
(c) POLYchaeta (16), marine bristle-worms with brush-like tufts of setae (773) for swimming.

IX. Mollusca.
(a) CEPHALOPODA (491)(536), with limb around the head, e.g. Octopus (34) (536), and the cuttlefish Sepia (805), which shoots out ink when disturbed.
(b) GASTROPODA (506) (536), littoral (95) forms such as limpets or whelks, and terrestrial forms such as snails and slugs.
(c) PELECYPODA (766) (536), clams, so-called because of the axe-like shape of the "foot." Here, come the pearl oyster, Ostrea margarifera (798), and the scallop pecten (748), so-called because of the comb-like ridges on its shell. All Pelecypods are bivalves. The two parts of the shell have a leathery hinge called the cardo (740).

X. ARTHROPODA (483) (536).
(a) **MYRIAPODA** (39) (536), *centipedes* (37)
(533) and *millipedes* (533), so-cafled because of their many feet.

(b) **Arachnida:**

(i) **ARANEIDA**, spiders.
(ii) **SCORPIONIDA**, scorpions,
(iii) **ACARINA*** ticks and mites.

(c) **HEXAPODA** (32) (536) or **INSECTA**, insects.

(i) **ORTHOPTERA** (336) (537), cockroach, locust, cricket, grasshopper.
(ii) **DIPTERA** (537), flies, mosquitoes,
(iii) **LEPIDOPTERA** (519) (537), moths and butterflies, whose wings have coloured scales, hence so-called.
(iv) **PEDICULINA**, lice.
(v) **SIPHONAPTERA** (418) (537), fleas—literally, wingless suckers.
(vi) **COLEOPTERA** (744) (537), beetles-so-called because of their wing sheaths.
(vii) **Hymenoptera** (537), including the bees or *Apidae* (554), the wasp family or *Vespidae* (627) and the ants, of which one genus, *Formica* (582), furnishes the painful root in *formic acid*, and hence *formaldehyde* of plastics.

(d) **Crustacea**, the shrimp tribe.

(i) **CONCHOSTRACA** (530), Daphnids and other pond-water shrimps with a bivalve shell.
(ii) **OSTRACoda** (530), Cyprids, so-called for same reason,
(iii) **Cirripedia** (533), barnacles, (iv) **COPEPODA** (745) (536), see note on p.29(e) **PeraCARIDA** (565), wood-lice and sand-hoppers.

(e) **DECAPODA** (32) (536), lobsters of which one much-eaten genus is *Homarus* (589), and crabs of which the chief edible genus is *Cancer* (563). XI. **Prochordata*** near-vertebrates with a skeletal axis corresponding to the embryonic backbone (noto-chord) of vertebrates, and gill slits. In general the gill slits do not open directly to the exterior. They extrude
water into a sort of courtyard or atrium (704), which opens
to the exterior by the atrioapore (704).

**XI Prochordata**, near-vertebrates with a skeletal axis corresponding
to the embryonic backbone (notochord) of vertebrates, and gill
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extrude water into a sort of courtyard or atrium(704), which
opens to the exterior by the atrioapore (704)

(a) **HEMIchorda** (40), acorn worms.

(b) **TUNICAta (701)** or **UROCHORDA(548)**, sea squirts,
with a gelatinous tunic and a tadpole-like larva with notochord
confined to tail.

(c) **CEPHALOchorda (491)** or **ACRANIA (497)**, *Amphioxus*
(144), so-called because pointed at both ends, the most
fish-like of the prochordates. The notochord is continuous
in the head region, hence first name, and it has no skull like
a true vertebrate, hence the alternative.

**XII. Vertebrata.**

(a) **CYCLOSTOMATA (712)** (528), lampreys and hags, with
round suctorial jawless mouths, and no paired fins, are
survivors of the most ancient group of Vertebrates, represented
in the rocks by such fossils as **CEPHALASPIS** (491) (773),
so-called because of its broad head-shield.

In contradistinction, the remaining forms with mouths furnished with
jaws are **GNATHOSTOMATA** (511) (528):

(b) **PISCES** (605), fishes with paired fins.

(i) **Selachii** (617), sharks and skates.
(ii) **Teleostei** (529), fishes with true bone,

(c) **AmphiBIA** (161).

(i) **URODELA** (548), tailed amphibians such as newts and
salamanders.
(ii) **ANURA** (548), tailless forms with saltatory (403) hind
limbs, frogs and toads.

(d) **REPTILIA,** unlike foregoing, have acleidoic (743) egg,
and no aquatic larva,
(i) CHELONIA, tortoises, turtles.
(ii) OPHIDIA, snakes.
(iii) LACERTILIA, lizards.
(iv) CROCODILIA, crocodiles and alligators.

(e) AVES (555), birds, including the Jurassic bird lizard Archaeopteryx (537).

(i) RATITAE, flat-breasted running birds such as ostrich, with a reptilian type of palate called dromeognathous (206) (510), because the sort of jaws running-birds have.
(ii) CARINATAE, flying birds with fluted palate, breast-bone with deep keel or carina for attachment of wing muscles. Many sing by means of reed-like voice-box, the syrinx (778), where the trachea (wind-pipe) divides to form the bronchi. Here comes the swan genus Cygnus, which we recognize in cygnet (575), the duck family or Anatidae (553), of which the geese form the sub-family Anserinae (554). The most useful bird is Gallus (584) domesticus, the domestic fowl.

(f) Mammalia.

(i) MARSUPIALIA (684), kangaroos and other mammals with pocket for young,
(ii) XENARTHRA (149) (484), sloths, armadillos and ant-eaters, so-called because of unusual joints of vertebrae.
(iii) RODENTIA, including the mouse and rat family Muridae (597), the Leporidae (594) or rabbits and hares, also squirrels.
(iv) CHIROPTERA (594) (537), bats, so-called because the hand modified to form a wing.
(v) CETACEA, whales, dolphins.
(vi) PINNIPEDIA, seals, walruses.
(vii) CARNIVORA (682), the flesh-eating mammals such as bears or Ursidae, the cat family or Felidae (580), which includes Felis tigris, and the dogs or Canidae (564), including the wolf, Canis lupus (596), and Canis vulpus (629), the fox. Their immediate ancestors were the Creodonts (682), such as the sabre-toothed tiger. The root crea- occurs in various
compounds extracted from meat, e.g. creatine, excreted in the urine if the diet is meaty.

(viii) **PROBOSCIDEA** or **PACHYDERMATA** (339) (502), the *Elephantidae* or *elephants* (577).

(ix) **UNGULATA** (547), hoofed mammals, including the *Equidae* or horse family, to which belongs *Equus asinus* (557), the donkey; *Bovidae* (557) or cattle; *Ovidae* (601), or sheep family, which also includes the goat genus *capra*; the *Cervidae* (567) or deer, the *Camelidae* (561), including *camels* and *dromedaries* (206), and the *Suidae* (621) or pigs. With the exception of the pig tribe, ungulates are herbivorous, and like rodents have crested or *lophodont* (420) molar teeth with which to crush their food.

(x) **PRIMATES**, monkeys, *Simiidae* (618), or apes, and *Hominidae* (590), human beings.
Because INTERGLOSSA is a purely isolating language like Chinese, it is possible to teach it by means of the universal picture language ISOTYPE.
NU LARVA
LARVA POST OVA = OVA PRE LARVA
OVA POST IMAGO = IMAGO PRE OVA
IMAGO POST PUPA = PUPA PRE IMAGO
PUPA POST LARVA = LARVA PRE PUPA
The complete flower (top left) with its cup-like CALYX (675), COROLLA and ANDROECIUM (4) (209) inserted below the FEMALE (5) residence or GYNAECEUM (834) (209) is HYPO. GYNOUS (85) (834). It is also SYNPECTALOUS (123) and SYNCARPOUS (123) (566) because the parts of the corolla and fruit are fused together. The OVARY (532) is MONO-SPERMOUS (27) (619) i.e. has one seed. The OVULE (532) or immature seed is ORTHOTROPOUS (336) (442), having its MICROPYLE (23) (383) of little perforation for the pollen tube turned vertically upwards. On the right is the ovule with the MEGASPORE (22) and TESTA (697) i.e. seed coat. Below are different arrangements of FLORAL (582) parts in flowers of various sorts.

**Essential FLORAL Organs**

- **GYNECIUM:** Stigma, Style/OVARY
- **PERIANTH:** COROLLA, CALYX

---

**Diagram:**

- **HYPOGYNOUS**
- **PERIGYNOUS**
- **EPICYNOUS**

**SYNPECTALOUS**

**POLYPETALOUS**

**POLYPETALOUS**

**POLYPETALOUS**

**PENTAMEROUS**

**TETRAMEROUS**

**PENTAMEROUS**

**MEROUS**

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PART II
THE SEMANTICS OF INTERGLOSSA

The next five chapters set forth the use of all the essential vocables of *Interglossa* with special reference to the semantic obscurities of English usage. Their completion awaited the preparation of a glossary of *Interglossa* equivalents for 10,000 most common Anglo-American words with their several meanings and idioms in which they occur. The English-Interglossa dictionary, compiled by Mrs. Dorothy Baker in consultation with the writer, appears as a companion volume. What follows does not attempt to duplicate its entire contents. We here confine ourselves to constructions likely to make demands on the ingenuity of the reader, especially the reader who is not as yet alert to the semantic pitfalls of the English—including and more especially Basic English—language.

The reader who is accustomed to the method of teaching a language by pairing off each of its vocables with that of another may be at first surprised by the number of equivalent Anglo-American words cited against each of the items which follow; and may get the impression that the meaning of an *Interglossa* vocable is proportionately diffuse. This is the reverse of the truth. The diffuseness of meaning which almost any Anglo-American vocable has acquired by metaphor, transferred epithet (e.g. *fortunate*), metonymy, synecdoche, litotes, or even oxymoron (*condescend*), makes it impossible to render the exact delimitation of a well-delimited vocable without the device of listing a constellation of near-synonyms and leaving the reader to extract its essential meaning from what is common to all of them.
THE SEMANTICS OF INTERGLOSSA

V. PSEUDONYMS (PRONOUNS), ARTICLES AND INTERROGATIVE OR IMPERATIVE PARTICLES (60)

Class I. The Eleven Pseudonyms

Of the eleven items in this class, five are contractions of international roots. The first three are not truly international in the sense defined on p. 13, but they have a wide range. The Gaelic mi is the universal Aryan first person pronoun (French me, Russian dative nine, Swedish mig, Persian man, etc.), and outside the Aryan group we have the Finnish mina. Tu is Persian in form and range, and is the universal Aryan singular form (French tu, English thou, Russian te). It also recalls the Finnish plural te. A satisfactory choice for the first person plural is more difficult, Aryan languages offer alternative forms (M-form plural, and N-form primitively dual). The Greek dual which recalls the N-form of Romance languages, suggests nam of Tamil. The Russian dative is also nam. Admittedly an N-form is confusing for the Chinese or for Swedes. Alternatives worth considering for (i) and (2) are: (1) wo (Pekingese wo, Cantonese go, Ital. io, Span, yo), (2) ni (Pekingese ni, Cantonese ne, Swedish Ni),

(1) mi, I, me, my
(2) tu, thou, thee, you, thy, your
(3) na, we, us, our

Members of this class, other than (8), can be substantive- or adjective-equivalents:

(4) an, he, him,
for male human beings is for mnemotechnic purposes chosen as abbreviation for andros (in polyandry, gynandromorph) and can mean male(s) as noun or adjective (cf. Scand. hanlig) if preceded by an article:

an pre date re a mi = he gave it to me
poly an = many males
un an persona = a male individual

(5) fe, she, her,
for female human being (short for femina infeminism), can also mean female(s) after an article.

(6) re, it, its, something, anything,
is short for res (see p. 256 ???). With an article it can mean thing(s) in the most general sense (topic).

(7) pe, one, one’s, is an abbreviation of : (7a) persona.
It stands for a human being of indefinite sex when we should say “he or she,” “him or her,” “his or hers,” one, someone, anyone. The full form means person(-al), (s), if preceded by an article. Pe is analogous to the Scandinavian common gender pronoun den.

(8) mu, they, them,
is the plural pronoun of the third person, short for the internationally current root multi- of multitude, multiply, etc., and has no other use except in so far as it appropriately takes the place of the pronouns these and those:

mu habe eu = those (they) are good

(9) auto is the reflexive pronoun equivalent to myself, yourself, ourselves, himself, itself, herself, oneself, and themselves.

As such it takes its proper place as direct object after the verb. Its compounds with the above (mi-auto etc.) are corresponding emphatic pronouns. Like (1-3) and (8), it is possessive by juxtaposition and as such refers back to the subject like the Danish sin, sit, sine

It is then equivalent to my own, your own, etc. Its adjectival value is self or personal (private), and with this meaning occurs in compounds, e.g. auto-aetio (shame = self-blame) :

Mi-auto pre dicte re = I myself said so
Mi acte lavo auto = I am washing myself
Mi acte phoro auto bibli para = I am bringing my book here

Mi acte phoro plu auto bibli = I am bringing my books
Un auto negotio = A private affair

(10) recipro means one another or each other, and as adjective or noun it is equivalent to reciprocal and reciprocity respectively. As adverb-equivalent, it means each to each :

Plu micro pedio-pe : esthe philo recipro = Little children, love one another i
Mu habe iso recipro = They are equal each to each

(11) su, short for subject (French sujet, Swedish subjekt
Spanish *sujeto*), is the *relative pronoun subject* corresponding to the single English *that* for *who* or *which* (see p. 40). Like other pseudonyms (see below), it is possessive (= *whose*) by juxtaposition, provided that it goes with the *subject* of the relative clause:

\[ \text{U gyna; su fili perde bio pre-di} = \text{A woman whose child died yesterday} \]

The following rules are essential:

(a) **Mu** is, like the French *on*, Teutonic *man*, useful to short circuit passive expression:

\[ \text{mu dicte} = \text{it is said (they say)} \]

(b) The possessive construction for *substantives* (p. 120) also holds good for pseudonyms, i.e. we express *my*, *her*, etc., by the postposed constructions *de mi*, *de fe*, etc. Thus we have:

\[ \text{u domi de fe} = \text{her house} \]

\[ \text{de domi de fe} = \text{of her house} \]

Recourse to the shorter device of *ii* a legitimate way of expressing *my*, *your*, *our* or *their*, but only when the possessive replaces the empty singular article *u(n)* or when the latter is unnecessary (see below). The roundabout construction is the only one appropriate when there is *an* accompanying plural article:

\[ \text{tu bibli} = \text{your book} \]

\[ \text{pan bibli de tu} = \text{all your books} \]

For *his* or *her* before a *substantive* in contradistinction to a verboid (p. 51), we must always use *de an* or *de fe* because the preposed pseudonym signifies *male* or *female*:

\[ \text{u fe parenta} = \text{the mother} \]

\[ \text{u parenta de fe} = \text{her parent} \]

\[ \text{un an ovi} = \text{a ram} \]

\[ \text{un ovi de an} = \text{his sheep} \]

(c) **Pe** is the common element of occupational compounds analogous to *toman* in *postman*, *hangman*, etc., e.g. *scholo-pe* = *teacher* (pp. 98-99). It is therefore equivalent to the agent
suffix -er. Where necessary, we can use -fe in the same way, e.g. dramo-fe = actress.

(d) In the same way - re makes compounds which signify the material thing associated with an abstract property. Thus with the amplifier clepto (theft) we can make clepto-re (booty, spoils) ; or with the verboid tene (hold, keep) we have tene-re = prop, holder, support.

(e) All pronoun-equivalents other than those mentioned are constructions involving pe, re or mil, e.g. :
satio mu = enough (of them) mero re = a bit (of it)

Class II, The Fourteen General Articles

A group of fourteen words has the double function of (a) indicating number (sing.-plur.) ; (b) acting as signposts of sentence-landscape by labelling a noun cluster as such. With two classes of exceptions, every substantive which does not follow one of the pronouns mi, tu, na, mu and su in its possessive sense must accompany one of these fourteen articles or a numeral. The exceptions are : (a) names of places, folk and persons ; (b) singular substantive clusters introduced by the place markers in, extra, etc. (76-99) and (101), and associative particles anti (103), de (109), homo (113), minus (115), per (117), plus (118), post (72), pre (73), pro (120), syn (123), which have no nominal equivalents listed below.

Singular Plural (12) u(n) (13) plu

These are empty words with no function other than as number-markers. The corresponding pronouns are pe or re for u(n) (short for Lat. unus in unify), and mu for plu (short for Lat. plures in plural). The singular empty article can replace a, an. Either of them can replace the non-demonstrative articles the, some, any. U(n) is the usual article for use with an abstract or group (un espero = hope). plu marks the plurality of a noun which need have no article in English (plu gyna = women, some women, the women). The corresponding demonstratives are formed with (95) para (here), and (78) apo (away), cf. Swedish del hdr and del ddr :

u para = this plu para = these
un apo = that plu apo = those

The corresponding pronouns are :
u para pe = *this (one) (person)*   plu para pe = *these (ones) (persons)*
u para re = *this (one) (thing)* plu para re = *these (ones) (things)*

un apo pe = *thai (one) (person)*   plu apo pe = *those (ones) (persons)*
un apo re = *that (one) (thing)* plu apo re = *those (ones) (things)*

The objection that the demonstrative articles and corresponding pronouns are unwieldy is not a formidable one. The history of language shows the constant degradation of demonstratives through overwork. Long ones are less likely to obtrude into situations where the context is sufficiently demonstrative.

*Note.*—U(n) means *any* unless we want to emphasize a choice of possibilities, i.e. unless *any* means *each*. We then use *singulo* (17). Plu means *some* unless we want to emphasize its partitive meaning. We can then use *u mero de plu* (19).

The next three are purely plural:

(14) *oligo*, *few, a few* Corresponding pronouns:

*oligo pe* = *few, few of them* (persons) *oligo re* = *few, few of them* (things)

(15) *pan, all*

*Note.*—*Pan* does not mean *each* (17) or *the whole of* (21) Corresponding pronouns with *pe* and *re* as above.

(16) *poly, many, numerous*

Corresponding pronouns with *pe* and *re* as above.

**The** next three are purely singular and, like the remainder, have substantival equivalents given in parenthesis:

(17) *singulo, each, every*

Means the same as *all* with the additional qualification that any statement made about the group applies to the individual members separately, and not to the group as a whole. It may precede a numeral, if what follows is a single group within a larger group:

*singulo bi poda = each pair of legs*
The pronouns are:

\textbf{singulo-pe} = everybody, everyone, each (person)
\textbf{singulo-re} =

\text{everything, each (thing)}

(18) \textbf{geno}, a sort of, the kind of, such a (kind, sort, class)
As article it is short for \textbf{u geno de}:

\textbf{geno gyna} = the sort of woman, such a woman
\textbf{geno avi} = a kind of bird, some birds

As substantive:

\textbf{de homo geno} = of the same sort, kindred

We can often render \textit{such} more appropriately by \textbf{un homo} or \textbf{plu homo} (113) = the like, (a) similar,

(19) \textbf{mero}, a bit of, a piece of, a part of (part), partly
As article it is short for \textbf{u mero de}:

\textbf{mero pani} = a piece of bread, some bread

The substantive construction \textbf{u mero de plu} does for \textit{some (of the)}:

\textbf{u mero de plu gyna} — some (of the) women

The corresponding pronouns are:

\textbf{mero re} = some (of it)
\textbf{mero mu} = some (of them)

The compounds \textbf{u mero-pe (person)} or \textbf{u mero-re (thing)} mean a member (of a group).

(20) \textbf{solo}, the sole, a solitary, singly, exclusively one, alone
This means \textit{only} or \textit{single} when \textit{only} and \textit{single} are interchangeable, and is equivalent to \textit{only} in \textit{two} situations: (a) when it follows \textbf{a} or \textbf{the} ; (b) when it precedes a \textit{pronoun}. It is \textit{not} equivalent to \textit{only} as qualifier of an attribute or numeral (p. 119):

\textbf{solo domi} = the only house, a single house
\textbf{solo fe} = only she, she alone

When \textit{only} follows the article \textbf{the} and precedes a \textbf{plural} noun it is equivalent to \textit{the only sort of} (\textbf{solo geno}):

\textbf{solo geno equi; su acte re} = the only horses which do so
To preserve the word-order of *Interglossa* we may have to use the corresponding pseudonym:

**Plu neo domi eque solo geno re ; mi esthe philo**
- The only houses I like are new ones (New houses are the only sort I like)

The next four are singular articles, but can qualify a plural noun if preceded by **plu, oligo, pan or poly:**

(21) **nolo**, the whole, complete, completely (completeness) As an article, adjective-equivalent and substantive in:

- holo historo = the whole story, a complete story
- plu holo domi = complete houses
- un holo de historo = the completeness of the narrative

Corresponding pronoun **holo re** = the whole (of it) or all.

(22) **mega**, much, a big, large, great(ness) The following are illustrative:

- mega hydro = much water
- mega domi = a big house
- mega espero = much hope
- plu mega domi = (the) large houses
- mega re = much (of it)

Before an amplifier mega can have the force of very, for which it is better to use (233) **forto** (intensely), especially before **mega, micro, major, minor**, e.g.:

- forto micro pani = very little bread

(23) **micro**, a little, small(ness)

- micro hydro = little water
- micro domi = a small house
- micro espero = little hope
- plu micro gyna = (the) small women
- micro re = a little (of it)

Note that **micro re** is not partitive. We often say a little, where mero is more appropriate.

(24) **quo**, which? what?

- quo domi = which house?
- plu quo domi = which houses?

**Quo** is purely interrogative, never relative (see pp. 39-40. The corresponding pronouns are:
**quo pe** who, which of them? (persons) **quo re** = what? which of them? (things) **quo mu** = which ones?

(25) **satio**, enough, sufficiently), (sufficiency)

This article is singular or plural as the context dictates. It appears as an article because it qualifies the substantive cluster as a unit.

**Satio pani** = enough bread

**satio ovi** = enough sheep

**satio re** (or **mu**) = enough (of it or them) un **auto-satio** = self-sufficiency

Unlike its equivalent sufficiently, the English enough follows an adjective it qualifies. **Satio** takes up the usual position:

**u satio mega domi** = a large enough house **re habe satio tbermo**

= it is hot enough

The following couplet is useful:

**satio eu** = adequate, good enough

All the preceding form demonstratives with **para** and **apo**:

**mero para re** = a bit of this **quo para pe** = which of these people?

**satio apo domi** = enough of these houses **singulo para gyna** = each of these women **pan apo re** = all of those

**Class III. Numeral Articles**

A cardinal numeral of Interglossa is an article, i.e. if it stands for a number alone it requires no article of Class II. The numeral vocabulary of natural languages antedates either: (a) the principle of arithmetical position, (b) the algebraic conventions for multiplication (a beside b = a times b), and division (a over b = a divided by b). In view of (a) we need only nine ordinary numerals, supplemented by **zero**:

It is also the emphatic negative particle (by no means, certainly not), and as such can replace **no** or **non** (96) before the verb or in answer to a question:

An **zero pre date re a mi**

He certainly did not give me it
The couplets zero pe- and zero re stand for nobody, none, not . . . anybody, and nothing, no one, not . . . anything.

Never use no . . . pe, no . . . re for not . . . anyone, not . . . anything (see note after (7)).

Zero pe (or re) de bi X means neither X, if we need to be explicit, but zero does for neither as adjective or (with pe or re) as pronoun.

(26) zero zero, no
(27) mono one   (28) bi two, both
(29) tri three  (30) tetra four
(31) penta five (32) hexa six
(33) hepta seven (34) octa eight
(13) nonea nine

Four other cardinals are useful to specify decimal magnitudes:

(36) deca ten   (37) centi hundred
(38) kilo thousand (39) myria or million million

The following fraction is useful:

(40) hemi, half Enumeration follows mathematical usage:

Mono bi hexa tri zero penta
One hundred and twenty-six thousand three hundred and five

Each of the above forms pronouns and demonstratives of the type prescribed:

bi para domi = these two houses
penta pe = five of them (persons)
tetra apo re = those four (things)
tri re de plu apo re = three of those (things)
hemi re = half (of it)
For numeral multiples and fractions we follow algebraic conventions, using **latero** (89) and **supero** (98), i.e. \(X\) *times* \(Y\) is \(X\) beside \(Y\) (\(X\) **latero** \(Y\)) and \(X/Y\)ths of \(Z\) is \(X\) over \(Y\) beside \(Z\) (\(X\) **supero** \(Y\) **latero** \(Z\)):

- **hexa latero deci** = *six times ten*
- **tri supero tetra** **latero** **bi mono** = *three quarters of twenty-one*

By analogy we may legitimately extend the same practice to **metrical** multiples:

- **penta latero mono masso** (de) = *five times as heavy (as)*
- **tri supero penta masso** (de) = *three-fifths as heavy (as)*

For **ordinal** relations we may take advantage of a trick of wide currency, illustrated in English by *psalm twenty-three, room number four, part III, chapter 6*. That is to say, we post-posit the numeral, e.g. :

- **tri gyna de an** = *his three wives*
- gyna **tri de an** = *his third wife hi*
- **tri canto** = *twenty-three songs*
- u **canto bi tri** = *the twenty-third psalm*

For *so many times* in a temporal sense, and for *so many apiece*, we use respectively **chron** (62) meaning *occasion* (definite time), and **singulo pe** (or **re**), each:

Accordingly we have :

- **mono chron** = *once*  
- **bi chron** = *twice*  
- **tri chron** = *three times*  
- **Mi pre dicte re tri chron** = *I said so three times*  
- **Singulo pe** (or **re**) **habe tri re** = *They have three apiece* (each has three things)

**Class IV. Interrogative, Imperative, Negative and Comparative Particles**

As stated (p. 34), the word-order of statements, questions and commands is unchangeable in *Interglossa*. Appropriate particles at the **beginning** of a statement give it the sense of a request, a command or a question.

(41) **peti** for polite imperative is short for :

(41a) **petitio** = *request*, e.g. :

- **Tu kine topo** = *You are going there*
- **Peti tu kine topo** = *Go there, please, or please go there*
- **Peti mi permito gene u cafa** = *Can I have some coffee ?*
By itself peti does service for please. For no thanks use peti no. The full form petitio is an amplifier. Thus we have:

Mi dicte petitio = I request (I express a request)
Mi pre gene petitio = I was requested (I got a request)

Like all amplifiers it may slide into a substantive cluster, and we recognize it as a noun-equivalent by the accompanying article, e.g. plu proximo peti(tio) = some recent requests.

For the impolite imperative we can simply drop out peti tu without change of word-order. We may then say:

Kine antero = Go in front

The need for the strong imperative will be rare, except in history books. An international auxiliary of peaceful communication is not for generals or for conversation with the cat.

Note.—Needless to say, the peti construction, and the contracted form given above, is not co-extensive with all situations involving the so-called imperative of an Aryan verb. The Aryan imperative may merely express a pious hope, aspiration, yearning or desire, which we make explicit as such, e.g.:

Na uranl parenta : na. dicte volo; tu nomino gene revero

Our Father which art in heaven, hallowed be thy name (i.e. Our heavenly parent, we express the wish (that) thy name gets worship)

Semantics of Interrogation

We may regard any question as a statement accompanied by a request to elicit either:

(a) Confirmation or denial of the statement as a whole, e.g.:
Is this your book? = This is your book: state if true or false

(b) Additional information not explicitly contained in the statement itself, e.g.:
Whose book is this? = This is someone’s book: state owner’s name
When did you do this? = You did this: state time
For *simple* questions, i.e. for questions of class (a) above, we have recourse to the preposited interrogative particle:

(42) que, short for:
(42a) questio = interrogative or question

Que takes the *initial* position like peti; The full form (42a), like petitio, is an amplifier:

Mi pre dicte questio mu de re = I asked them about it
Mi pre gene questio e mu de re = I was asked by them about it

As an amplifier it may take the place of an epithet or noun-equivalent in a substantive cluster:

u nu questio = the present problem
u questio moro = the interrogative habit (i.e. curiosity)

The following illustrate the use of que as signpost of the simple question:

Que tu pre date re a mu = Did you give it to them?
Que tu habe poly re = Have you many of them?
Que re habe thermo = Is it hot?

The second class of questions, i.e. (b) above, includes those which begin with who, whom, whose, which, what, where, when, why, how. The equivalent for all of these involves quo (24).

For questions involving who, which, what, as subject, the word-order of English and Interglossa is the same, e.g.:

Quo pe habe re = Who has it?

When the topic of interrogation is *not* the subject, the word-order of Interglossa remains as in the equivalent affirmative statement:

Tu esthe volo quo re = What do you want?
Tu pre date re a quo pe = To whom did you give it?
Fe eque u gyna de quo pe = Whose wife is she?

Questions which begin with an interrogative adverb reduce to the same general type. Thus:

*where*? = at what place? or in what position?
*when*? — at what time? on what occasion? or during what interval?
*why*? — to what end? with what aim? or for what reason?
The prepositions in the equivalent English substantival phrases are redundant. Accordingly we have:

where? = **quo loco** (53) or **quo topo** (100) when? — **quo chron** (62) or **quo tem** (75) why? = **quo causo** (104) or **quo tendo** (125)

Such expressions as the above are interrogative qualifiers of what would otherwise be a plain statement. As such they may come at the beginning or at the end (p. 36) of it:

**Fe habe eco quo loco** = *Where is she living?*

**Quo chron re pre habe accido** = *When did it happen?*

**Quo tendo tu kine apo** = *Why are you going away?*

**Quo causo re habe thermo** = *Why is it hot?*

The uses of *how* are various. For *how soon?* or *how recently?* we can use **quo chron** or **quo proximo** (121) to elicit the appropriate response. Otherwise we may distinguish between the following situations:

(i) When *how*, signifies *by what means?* the appropriate construction is **que methodo** (302):

**Quo methodo tu acte re** = *How do you do it?*

(ii) When *how* precedes a *metrical* abstract it is equivalent to **quo** alone:

**Re habe quo metro de alto** = *How high is it?* (what height has it?)

**Re habe quo masso** = *How heavy is it?* (what weight has it?)

(iii) *How often?* is **quo frequo** (238) = *with what frequency?* e.g.:

**Tu pre acte re quo frequo** = *How often did you do so?*

(iv) When *how* precedes a numeral qualifier such as *few many*, or when it precedes *much* and *little* applied to enumerable objects, we use **quo numero** (327), e.g.:

**Tu habe quo numero ova** = *How many eggs have you?*

**An habe quo numero valuta** = *How much money has he?*
(v) When *how* precedes *much, little, or any abstract which i; implicitly metrical*, it is equivalent to *in what measure? o\ to what extent?* For this we have *quo metro* (114):

Quo metro re habe malo  = *Just how bad is it?*
Quo metro tu habe u texti = *How much cloth have you got?*

The periphrastic interrogative adverbs *quo loco, que causa*, etc., can introduce either a rioun-clause or a phrase involving an English infinitive-equivalent with an interrogative flavour:

Mi non esthe sapio; quo causa tu pre kine apo
*I don’t know why you went away*

Mi non esthe sapio; quo methodo de gene re
*I don’t know how to get it*

*What, which, or whom* may also introduce a noun-clause with an interrogative flavour, e.g.:

Mi pre dicte questio; tu esthe volo quo re
*I asked what you wanted*

Mi dicte questio : tu esthe volo quo pe
*I am asking whom you want*

The interrogative article is *not* redundant in the preceding examples. Thus:

Mi pre dicte questio; que tu esthe volo re
*I asked whether you wanted it*

As the object of a noun-clause *whom, which, what* may mean *the person* or *the thing* which is the implicit object of the principal, and it is sometimes more appropriate to translate it by means of a relative construction:

Mi esthe sapio re; tu esthe volo  = *I know what you want*
Mi esthe sapio pe; tu dicte tendo  = *I know whom you mean*
An esthe sapio re; auto debito acte = *He knows what to do*
Fe no poto acte re; an acte = *She cannot do what he does*

**Negation**

The negative particle is : (43) *no(n)*, not or noi
The exclamation mark after *no* signifies that *no(n)* corresponds to *no* when the latter is the answer to a question or a signal of denial. It is not
the negative article (see zero). It cannot precede a substantive cluster; but it may precede an adverbial particle like the English no in no more than (no major de) or no less than (no minor de). In compounds it is equivalent to in- of incomplete (non-holo), etc., or un- of unequal (non-iso), etc. No(n) can combine with any amplifier to form negative compounds of this type, e.g. no-preparo = unready (138), no-volo = unwilling (128), etc.; and this is the general recipe for making opposites. Admittedly a negative is not necessarily an opposite; but it is the idiom of Interglossa to leave as much as possible to context. If we call a shallow hole a hole that is not deep (no-batho), the assumption is that we should not go out of our way to deny its depth for any other reason. We can always indicate that it is neither one nor the other by saying that it is not very deep (no mega batho).

No uncertainty arises when the notion involved is purely qualitative, e.g. puro—no-puro (clean—dirty), and we can make medium intensity of a metrical amplifier explicit by recourse to meso (91), e.g. :

\[
\begin{align*}
\text{thermo} &= \text{hot, heat} \\
\text{meso-thermo} &= \text{warm(th)}
\end{align*}
\]

The usual rule that an amplifier is both an abstract noun and an adjective-equivalent does not hold for the metrical amplifiers alto (150), batho (159) and longo (290), meaning respectively high, deep and long. The corresponding nouns height or level, depth and length or distance convey no information about whether the dimension specified is great or small. Accordingly, we express them by recourse to the construction metro de (extent of), e.g. u metro de alto de Y = the height of Y; u metro de longo trans Y = the width of Y, the breadth of Y.

The idiom of Interglossa prescribes zero constructions wherever the implication is a comprehensive or exclusive negative. Hence the rule: never use no(n) to translate not . . . one, not . . . a single, not . . . anything, not...

either. Adherence to this rule prevents ambiguities that constantly arise in English, e.g. :

(a) Does I have not a single thing mean I have more than one thing (mi habe majqr de mono re), or I have none (mi habe zero re)?

(b) What does I don’t want either a book or a pen mean? If the function of either . . . or, like that of allo in Interglossa, is to prescribe
the acceptance of one alternative and the rejection of the other, the statement is consistent with the meaning of I want both a book and a pen or nothing at all.

*Interglossa* prohibits *allo* in a negative statement involving *not*, and the correct translation for *neither . . . nor* is *zero . . . zero*, e.g. *mi esthe volo zero bibli zero penna.*

From a semantic point of view it might seem an advantage to have one form of negative construction (i.e. to use *no(n)* alone), because *no X (zero X)* cannot have a logical predicate A logically self-denying ordinance to prohibit the use of *nothing, nobody*, etc., would admittedly be a safeguard against such traps as: *nothing is better than wisdom; dry bread is better than nothing; therefore dry bread is better than wisdom.*

Still, syllogistic reasoning is equally inappropriate to other situations involving metrical comparison, e.g. *a young elephant is a small elephant; an elephant is an animal; therefore a young elephant is a small animal.* We do not deprive ourselves of the immense economy of operating with 0 as a number, because 0 has peculiar logical properties, such as the fact that the ratio of two zeros is not necessarily unity. It would be just as foolish to rule out the highly economical use of *nothing* and *nobody* as to put the clock back to the time before arithmetic took advantage of operations with the number 0.

**Comparison**

There are three comparative articles:

(44) *iso, equal(ly); equality; identically; identity*

We use this with the empty particle of general relationship (109) *de (= in relation to, with reference to)* for the construction *so . . . as or as . . . as (= equally . . . in relation to)*, e.g.:

*iso poly domi de — as many houses as*

When the word which follows *as or so* in a construction of this sort is not explicitly metrical, we can also use (113) *homo . . . de (= similarly . . . in relation to)*, e.g. : *homo chloro de = as green as*

*Homo* is the usual equivalent of *as or like*, but if *like* has the force of *equally or just as much as*, we can use *iso*, e.g.:

*epi geo iso in urani — on earth as it is in heaven*
The usual meaning of *even* is *including* (see 105) when it precedes a qualitative *attribute*; but when *even* precedes an *enumerative*, it signifies an *equality* (*as many as*) for which we can put *iso poly de*:

Mi non habe *iso poly de tri re* — *I have not even three (of them)*

From *iso* we have the couplets:

(62) *iso chron* = *synchronous, synchronism, simultaneous, simultaneity*
(100) *iso topo* = *coincident (in space)*
(75) *iso tem* = *synchronous (= coextension), contemporaneous, contemporary*
(89) *iso latero* = *symmetrical, symmetry*
(45) *major*, *more; greater; bigger; larger*  
    *major de* = *bigger than; larger than; more than*
(46) *minor*, *less; smaller*  
    *minor de* = *smaller than; less than*

*Major* and *minor* are comparative particles. They are not articles, nor pronouns. As they stand they do not therefore tally with the various elliptical uses of *more* and *less*; nor do they necessarily occupy the same position in the sentence matrix. *More* may mean *extra- or additional, an extra number of them, or an additional quantity of it* (see 118 below). We rely on context to supply the standard of comparison. Similar remarks apply *mutatis mutandis* to *less*. In *Interglossa* we can make *quantity* and *number* explicit by recourse to *metro* (114) and *numero* (327). The following paradigms illustrate different types of comparison:,

\[
\begin{align*}
\text{u major domi} & = \text{a larger house; a bigger house} \\
\text{u minor domi} & = \text{a smaller house} \\
\text{u major re (or pe)} & = \text{a bigger one; a larger one} \\
\text{u minor re (or pe)} & = \text{a smaller one} \\
\text{mono domi major de Y habe} & = \text{one more house than Y have (or has)} \\
\text{mono re (or pe) minor de Y habe} & = \text{one less than Y have (or has)} \\
\text{mono domi major de pre} & = \text{one house more than before; an extra house} \\
\text{mono domi minor de pre} & = \text{one house less than before} \\
\text{mono re (or pe) minor de pre} & = \text{one less of them than before} \\
\text{mono domi major de satio} & = \text{one house too many} \\
\text{mono re (or pe) minor de satio} & = \text{one too few}
\end{align*}
\]
u major numero de domi = more houses
u minor numero = less of them
u numero de domi minor de pre = less houses than previously
u numero major de pre = more than before
u minor metro de terra = less land
u major metro = more of it
u metro de terra major de pre = more land than before; extra land
u metro minor de pre = less than before

The combinations major de and minor de can qualify an article or numeral, as in:

major de penta domi = more than five houses
minor de mono litri = less than a litre
major de satio domi = more than enough houses
minor de satio terra = less than enough (too little) land
minor de holo re = less than the whole (of it)

The following illustrate the uses of major and minor as qualifiers of an adjective-equivalent:

u major decoro domi (de) = a more beautiful house (than)
u minor resisto domi (de) = a less robust house (than)

No special form is necessary to do the work of most, nor one for least.
We can make the superlative explicit by making the standard of comparison exclusive with residuo (394), i.e.:

u major . . . de pan residuo re (or pe) = most (greater than all others)
,u minor . . . de pan residuo re (or pe) = least (less than all others)

We have also at our disposal two equivalent vocables of wide international currency both in statistics and in physical science. Their plural forms are consonant, with the phonetic pattern of Interglossa without change; and we may assimilate them, as we can assimilate (p. 239) without change the plural form of any internationally current technical term of which the singular has the ending -um. It is therefore unnecessary to list them by number as items of our essential list of constructed vocables. They appear in the supplementary list of 68 international words taken over as they stand (p. 256), viz.:

maxima = maximum; maximal; most
\textbf{minima} = \textit{minimum; minimal; least}

An important function of \textit{minor} is that it provides a convenient form of comparison for opposites, already illustrated on p. 44. Thus with (395) \textit{resisto} (\textit{strong, strength}, of materials or aim as Opposed to bodily power or intensity) we have:

\begin{align*}
\text{resisto} &= \text{strong} \\
\text{no-resisto} &= \text{weak}
\end{align*}

\begin{align*}
\text{major resisto de} &= \text{stronger than} \\
\text{minor resisto de} &= \text{weaker than}
\end{align*}

\textbf{Class V. \hspace{1em} Generic Substantives}

A limitation to word-economy in most natural languages is paucity of generic terms from which it is possible to build up self-explicit compounds of the type mentioned on p. 17. A constructed language is free from this limitation. We can therefore extend our battery of common nouns beyond the narrow scope of the Basic English equipment without adding to our stock of \textit{essential} vocables. Many common nouns are word-forms differentiated from others in virtue of human associations which always or almost always appear sufficiently in the context. Though we make a distinction between \textit{sheep} in the field and \textit{sheep} on the table by having a separate word \textit{mutton}, we do not repine lack of a separate word \textit{for fish} in the sea and \textit{fish} on the plate.\footnote{For \textit{cattle}, English has in all ten words—\textit{ox} for transport, \textit{cow} for milk, \textit{bull} for breeding, \textit{bullock} for fattening, \textit{calf} new-born, \textit{heifer} yoyng cow, \textit{steer} young bull, \textit{beef} cooked adult, \textit{veal} cooked young.}

We have separate words for \textit{flax}, \textit{thread} and \textit{linen}, though the single vocable \textit{cotton} suffices for the plant, the spun filament and the material woven from it. The context sufficiently indicates the distinction between \textit{beef} and \textit{cattle} or between \textit{flax} and \textit{linen} without recourse to separate words. In the same way many class words used in technical discussion sufficiently indicate an object in the context in which it occurs. The single word \textit{filament} for \textit{thread}, \textit{cotton, string, rope, cord, wire, fishing-line}, is explicit enough in most ordinary situations. The fact that we can always use the generic name unless the context fails to divulge the specification, overrides the objection that more explicit compounds may be unwieldy.

\textit{Interglossa} has no lifeless affixes. With few exceptions the vocables are based on intact roots, but four foregoing words (\textit{an, fe, pe, mu}) are truncated, and two (\textit{peti, que}) are \textit{optional} truncatea forms. For equivalents of many substantives we can rely extensively on compounds involving one or other \textit{generic} terms,, which have alternative truncated forms for...
optional use to short-circuit prolixity. One of these is the 44 occupational "class (p. 84) based on -pe. This is much more comprehensive than the corresponding -man class of English, including all occupational and personal terms except discipuli (828) (scholar, pupil, student), polizi (843) and secretari (853). Thus we have \{inter alia\} :

<table>
<thead>
<tr>
<th>Term</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>aero-pe</td>
<td>airman (146)</td>
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<tr>
<td>agri-pe</td>
<td>farmer (631)</td>
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<tr>
<td>alieno-pe</td>
<td>stranger (149)</td>
</tr>
<tr>
<td>amico-pe</td>
<td>friend (151)</td>
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<tr>
<td>anti-pe</td>
<td>enemy, foe (103)</td>
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<td>archo-pe</td>
<td>officer, manager, director (153)</td>
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<tr>
<td>arma-pe</td>
<td>soldier, warrior (811)</td>
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<tr>
<td>bibli-pe</td>
<td>publisher (814)</td>
</tr>
<tr>
<td>billeta-pe</td>
<td>ticket collector (815)</td>
</tr>
<tr>
<td>catalyso-pe</td>
<td>helper, assistant (166)</td>
</tr>
<tr>
<td>commisari-pe</td>
<td>minister of state (823)</td>
</tr>
<tr>
<td>duco commisari-pe</td>
<td>prime minister (207)</td>
</tr>
<tr>
<td>commuao-pe</td>
<td>partner, comrade (181)</td>
</tr>
<tr>
<td>controlo-pe</td>
<td>driver, pilot (185)</td>
</tr>
<tr>
<td>culino-pe</td>
<td>cook (191)</td>
</tr>
<tr>
<td>duco-pe</td>
<td>head, chief, boss (207)</td>
</tr>
<tr>
<td>crati duco-pe</td>
<td>governor, prefect (826),</td>
</tr>
<tr>
<td>electio-pe</td>
<td>delegate, representative (211)</td>
</tr>
<tr>
<td>equi-pe</td>
<td>horseman, cavalry (578)</td>
</tr>
<tr>
<td>ergo-pe</td>
<td>worker (214)</td>
</tr>
<tr>
<td>duco ergo-pe</td>
<td>foreman (207)</td>
</tr>
<tr>
<td>patho-do ergo-pe</td>
<td>nurse (348)</td>
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<tr>
<td>espio-pe</td>
<td>spy (217)</td>
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<tr>
<td>experto-pe</td>
<td>expert, technician (222)</td>
</tr>
<tr>
<td>nato experto-pe</td>
<td>obstetrician (318)</td>
</tr>
<tr>
<td>sano expertb-pe</td>
<td>physician, doctor (406)</td>
</tr>
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<td>extra-pe</td>
<td>foreigner, alien (84)</td>
</tr>
<tr>
<td>helo-pe</td>
<td>slave, serf (258)</td>
</tr>
<tr>
<td>in-pe</td>
<td>inhabitant (86)</td>
</tr>
<tr>
<td>judico-pe</td>
<td>judge, umpire, referee (274)</td>
</tr>
<tr>
<td>Jacti-pe</td>
<td>milkman (517)</td>
</tr>
<tr>
<td>lego-pe</td>
<td>lawyer (280)</td>
</tr>
</tbody>
</table>
maturo-pe  adult (299)
ministro-pe  servant (304)
crati ministro-pe  civil servant (826)
monito-pe  guide, adviser (309)
myria-pe  millionaire (39)
nato-pe  native (318)
navi-pe  sailor, mariner (764)
negotio-pe  agent, negotiator (320)
onero-pe  official (332)
ovi-pe  shepherd (599)
pattio-pe  invalid (347)
pedio-pe  child (349)
philo-pe  lover (355)
pro-pe  ally, supporter (120)
sapio-pe  sage, scholar, savant (406)
scholo-pe  teacher, instructor, professor (407)
syn-pe  associate, colleague (123)
religio-pe  minister, priest, parson, clergyman (392)
tene-pe  keeper, curator (480)
typo-pe  printer (444)
valuta-pe  cashier (859)
vendo-pe  shopkeeper, tradesman (451)
itinero vendo-pe  salesman; commercial traveller (273)
bibli vendo-pe  bookseller (814)
phago-ma vendo-pe  grocer (353)
eco vendo-pe  boarding-house keeper, landlord, landlady (209)

The reader may ask how we distinguish such a spoken couplet from the corresponding compound, labelled in print as such by a hyphen. The following comments should suffice to dispel this difficulty:

(i) Juxtaposition of an adjective and a noun in an Aryan language is not, as school text-books lead us to believe, the logical operation of limiting a class of things, notions or persons sufficiently labelled by the latter to those of its members who share the common property uniquely specified by the former. An adjective-noun couplet is a semantic unit which we have to interpret in the light of custom and context as we interpret the meaning of a compound. Without the clue which one or the other supplies, what precise meaning we attach to the couplet social worker has as much and as little to do with dictionary definitions of
social and worker as has the meaning of brickyard with dictionary definitions of brick and yard.

(ii) Where confusion might arise, we can fall back on any one of three devices:

(a) Since it is always redundant to use the word person in a predicative expression, we need not, and should not, use pe in this situation. We do not say: *fe eque u forto religio pe* (she is a deeply religious person). We say: *fe habe mega religio* (she is very religious)

(b) Otherwise we can make use of the full form persona (individual), as in: *u forto religio persona habe eco proximo* (a very religious person lives hard by)

(c) A high proportion of occupational terms have a special local flavour. For all such, *Interglossa* prescribes (p. 20) the local name. This is en rapport with educated speech everywhere. Thus the English translation of a French novel takes over cure, which has no precise equivalent within the framework of Anglo-American social custom, without mutilating its meaning by recourse to the equivalent word listed in a pocket dictionary. Since the word religion refers to a great diversity of social habits, and the word priest to officials with a great variety of social functions, we can always sidestep any ambiguity arising from use of the compound religio-pe by using the correct local term.

As stated on p. 84, we can make an analogous class of -re compounds, e.g.:

- claustr-o-re  button, fastener (232)
- ferra-re  ironware (795)
- inhibito-re  brake (268)
- pendo-re  braces, suspenders (116)
- pedi-re  step, stair (533)
- pyro-re  lighter (384)
- reflecto-re  mirror (391)
- reslduo-re  remains, fossil (394)
- tene-re  holder, prop, buttress, support (480)
- vendo-re  goods, ware, merchandise (451)

The following generic substantives or amplifiers likewise form compounds. They come at the head of our list partly for this reason, and
partly because they are based on *truncated* roots or have shortened forms for use in compounds:

(47) *cameri* or -ca, *room, chamber; cabin, hall compartment*

All names of rooms are -ca compounds. With the exception of the first, the antecedent element of such compounds an amplifier signifying the function or situation of the room:

<table>
<thead>
<tr>
<th>Compound</th>
<th>Function/Situation</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>billeta-ca</td>
<td>ticket-office</td>
<td>(815)</td>
</tr>
<tr>
<td>culino-ca</td>
<td>kitchen</td>
<td>(191)</td>
</tr>
<tr>
<td>dissipo-ca</td>
<td>W.C.</td>
<td>(202)</td>
</tr>
<tr>
<td>ergo-ca</td>
<td>study, workroom, workshop</td>
<td>(214)</td>
</tr>
<tr>
<td>hospito-ca</td>
<td>guest-room</td>
<td>(262)</td>
</tr>
<tr>
<td>ijypo-ca</td>
<td>cellar, basement</td>
<td>(85)</td>
</tr>
<tr>
<td>lavo-ca</td>
<td>bathroom, lavatory</td>
<td>(278)</td>
</tr>
<tr>
<td>navi-ca</td>
<td>ship’s cabin</td>
<td>(764)</td>
</tr>
<tr>
<td>pedio-ca</td>
<td>nursery</td>
<td>(349)</td>
</tr>
<tr>
<td>peno-ca</td>
<td>cell, dungeon</td>
<td>(351)</td>
</tr>
<tr>
<td>phago-ca</td>
<td>dining-room</td>
<td>(353)</td>
</tr>
<tr>
<td>puro-ca</td>
<td>scullery</td>
<td>(382)</td>
</tr>
<tr>
<td>sedi-ca</td>
<td>sitting-room</td>
<td>(691)</td>
</tr>
<tr>
<td>avido</td>
<td>aviary</td>
<td>(557)</td>
</tr>
<tr>
<td>agri-do</td>
<td>farmhouse</td>
<td>(631)</td>
</tr>
<tr>
<td>api-do</td>
<td>apiary, beehive</td>
<td>(555)</td>
</tr>
<tr>
<td>arma-do</td>
<td>barracks</td>
<td>(811)</td>
</tr>
<tr>
<td>bibli-do</td>
<td>library</td>
<td>(814)</td>
</tr>
<tr>
<td>bibo-do</td>
<td>tavern, inn, pub, saloon, speakeasy, alehouse</td>
<td>(160)</td>
</tr>
<tr>
<td>bovi-do</td>
<td>ox-byre, cattle-shed</td>
<td>(558)</td>
</tr>
<tr>
<td>religio-do</td>
<td>church, chapel temple</td>
<td>(393)</td>
</tr>
<tr>
<td>dramo-do</td>
<td>theatre</td>
<td>(205)</td>
</tr>
<tr>
<td>eco-do</td>
<td>boarding-house</td>
<td>(209)</td>
</tr>
<tr>
<td>sporto-do</td>
<td>gymnasium, stadium</td>
<td>(426)</td>
</tr>
<tr>
<td>hypo-do</td>
<td>foundations</td>
<td>(85)</td>
</tr>
<tr>
<td>negotio-do</td>
<td>business house, office</td>
<td>(320)</td>
</tr>
<tr>
<td>patho-do</td>
<td></td>
<td>h o s p i t a l</td>
</tr>
<tr>
<td>ovi-do</td>
<td>sheep-pen</td>
<td>(599)</td>
</tr>
<tr>
<td>pena-do</td>
<td>prison, penitentiary</td>
<td>(352)</td>
</tr>
<tr>
<td>phago-do</td>
<td>restaurant</td>
<td>(354)</td>
</tr>
<tr>
<td>dendra-do</td>
<td>woodshed</td>
<td>(576)</td>
</tr>
<tr>
<td>scholo-do</td>
<td>school</td>
<td>(410)</td>
</tr>
<tr>
<td>sperma-do</td>
<td>granary</td>
<td>(619)</td>
</tr>
<tr>
<td>equi-do</td>
<td>stable</td>
<td>(578)</td>
</tr>
</tbody>
</table>
ergo-do   works, factory (214)  sui-do pigsty (621)  v
extra-do   outhouse (84)     taxi-do garage (779)
galli-do   fowlhouse (584)    vendo-do shop, store (451)

Since -do compounds are man-made erections, and the antecedent never specifies the material used for making it, we have the full forms:

u dendra domi., a wooden building (576)  u texti domi   a tent (57)
(49) fascio or -fa, group, set, bunch, batch, heap, collection
No special rule is necessary for such self-explicit compounds as:
camerai-fa flat, apartment   radio-fa   radio set (387)
caula-fa sheaf (567)   rhabdi-fa faggot (612)
dendra-fa grove, thicket (576)  tea-fa tea service (696)
dissipo-fa rubbish heap (202)   tricha-fa lock, tress (546)
fi-fa wick (50)   vasa-fa dinner service (58)
flora-fa   bouquet (582)  vesto-fa suit of clothes, dress (59)
(50) fi, cord, filament, line, rope, string, thread, wire

This is a contraction of the international root fila- of filament. The full form would be a homophone of phylla (602), and is therefore unsuitable. In 'most situations its generic meaning sufficiently distinguishes the mere specific terms listed above, but we can make such distinctions explicit by compounds or couplets, as under. We list those with a material antecedent with a hyphen, e.g.:
cannabi-fi string, rope (562)  lina-fi   thread (595)
dermi-fi strap (502)   metalli-fi wire (799)
gossypi-fi cotton (586)  cupra-fi copper wire (794)
lana-fi wool, yarn (518)  ferra-fi iron wire (795)
larva-ft silk (p. 256)

We drop the hyphen in functional couplets such as:
morto ft (hangman’s) noose (312)  pisci fi fishline (606)
vesto ft clothes-line (59)   pedi ft shoelace (533)
(51) instrumenti or -ru, tool, instrument
The antecedent of a -ru compound always points to its function:
denti-ru dental instrument (501)  occlu-ru spanner (765)
plato-ru plane (364)  fi-ru needle (50)
There are four basic compounds of -li other than precious stones, as below:

lamina-li slate (757) orno-li precious stonesjewels (335)
mica-li granite (p. 232) silica-li quartz (p. 232)

Since the popular names of jewels have little relation their chemical composition, great precision is not essential: We use -li compounds for all translucent jewels:

chloro-li emerald, beryl (171) erythro-li ruby, garnet (216)
iodio-li amethyst (271) chromo-li opal (174)
leuco-li diamond (281) cyano-li sapphire (195)
luteo-li topaz (292) mari cyano-li aquamarine (650)
melano-li jet (300) phaeo-li amber (352)

For non-translucent, ornamental stones we use the full form: lithi, e.g.: chloro lithi, jade, malachite, chrysoprase cyano lithi, lapis lazuli

(53) loco or -lo, place, region, territory, domain, locality Important compounds are:

auto-lo home, at home (9) pan-lo everywhere (15)
u cavito-lo cave (167) u pedi-lo floor (533)
u dendra-lo forest, wood, coppice (576) u peri-lo surroundings, environment, neighbourhood (96)
un electio-lo constituency, ward (210)
u plato-lo plain, plateau (3?) hetero-lo elsewhere (259)
u vacuo-lo clearing, glade (448)
u natio-lo country (317) zero-lo nowhere (26)
un ortho-lo cliff, escarpment (336) u stato-lo station, halt, pier (427)

(54)materia or -ma, material, stuff, substance
The antecedent of -ma compounds is an amplifier which denotes its characteristic property, e.g.:

- **bibo-ma** beverage, drink
- **phoro-ma** conductor (of heat or electricity)
- **chromo-ma** dye
- **geo-ma** mineral
- **proto-ma** material resource, raw material
- **hypo-ma** dregs, sediment
- **mature-ma** fertilizer
- **residue-ma** residue
- **mero-ma** ingredient, component
- **supero-ma** scum
- **zygo-ma** chemical compound
- **narco-ma** drug
- **phago-ma** food

(55) **mechani** or -me, machine, apparatus, device, engine, mechanism

The antecedent points to the function or the source of power:

- **grapho-ma** typewriter
- **sperma-ma** threshing machine
- **bora-ma** clock, watch, timepiece
- **electro-ma** electric motor
- **petrolea-ma** internal combustion engine
- **puro-ma** vacuum cleaner
- **vaporo-ma** steam engine

(56) **mobili** or -mo, furniture, movables

From this we can get functional compounds, such as:

- **bibli-ma** bookcase
- **phoro-ma** dumb waiter
- **grapho-ma** writing-desk
- **tene-ma** movable cupboard
- **lavo-ma** washstand
- **lecto-ma** reading desk, lectern
- **vesto-ma** wardrobe

(59)

(57) **texti** or -te, fabric, cloth, textile, woven material, tissue, canvas, muslin, etc. Like others of this class, texti usually suffices for any of the more specific words listed above unless the context demands a more explicit term. We can then make compounds based on (a) material source; (b) usage; (c) any characteristic quality, e.g.:

(a)

- **gossypi-te** muslin
- **larva-te** silk (p. 222)
lana-te woollen wear, tweed, hose (518)

lina-te linen (595)

(b)
dessico-te towel (200) puro-te duster (382)
phago-te napkin, serviette (352)

(c)
pendo-te curtains, draperies (116) reti-te lace (769)
lana reti-te knitted work (517) vela-te canvas, sailcloth (783)

(58) vasa or -va, vessel, container, jug, mug, cup, bowl, pitcher, etc.

We can make the meaning of vasa more explicit by use of an antecedent pointing to a sufficiently suggestive characteristic, other than the material of which it is composed:

cbiri-va bucket, pail (493) lavo-va wash-basin (278)
ora-va mug, glass, cup (528) culino-va kitchen utensil (191)
phoro-va jug, pitcher (358) lipe culino-va frying pan (519)
soma-va bath (541) tea-va teapot (696)
lacti-va milk-jug (517) vaporo-va kettle (450)

We can use va- for tinned, canned or bottled fruit, etc., e.g.:

va-carpa bottled or tinned fruit (566) va-crea canned meat (682)

(59) vesto or -ve, covering, clothes, vesture, costume, -wear, suit, dress

As an amplifier vesto means the act of covering or the result of the act, in accordance with remarks on p. 19.

brachi-ve sleeve. (485) mamma-ve brassiere (see p. 240)
ceptiali-ve headwear (491)
cervica-ve neckwear, scarf (493) nocti-ve nightwear, pyjamas (70)
chiri-ve glove (494) pedi-ve boots, shoes, footwear (533)
clinica-ve bedclothes (679) in pedi-ve socks, stockings (86)
lana clinica-ve blanket (518) poda-ye trousers, pants
clinica-ve sheet (595) (Amer.), legwear (536)
ergo-ve overalls, apron (214) in poda-ve : panties, knickers, pants
extra-ve outer clothing (84) in-ve underwear (86)
(60) **zona** or **-zo**, ring, belt, hoop, zone, band

Where the context supplies no clue to a more precise meaning, we can make such compounds as:

- **brachi-zo**  
  armlet (485)  
  **dactyli-zo**  
  (finger) ring (500)

- **carpi-zo**  
  bracelet (490)  
  **gameo-zo**  
  wedding ring (244)

- **cervica-zo**  
  necktie, halter (493)  
  **meso-zo**  
  girdle, belt (91)

- **poda-zo**  
  garter (Brit.) (536)  
  **orno cervica-zo**  
  necklace (335)

**Note on SOME, ANY and WHATEVER**

We have had occasion (pp. 18-19 and footnote on p. 31) to note that the small number of items essential to acceptable discourse in the Basic English word-list depends far more than most enthusiasts realize on inclusion of highly polyvalent words comparable to the Chinese homophones. This is conspicuously true of prepositions and of other particles which make up the grammatical matrix. Four small words which are pitfalls to the beginner call for special treatment. These are: **any, some, only** and **even** together with the periphrasis **at all** (= **whatever**). **Only** and **even**, come up for discussion under (105) on p. 119.

That the use of **some** and **any** causes difficulties to a Frenchman or a German is not surprising when we look at the way in which we use them. For our present purpose we may distinguish the following:

(i) In **negative** statements or questions involving **not . . . , any** (or more rarely **not . . . some**) the combination does the work of **no** (German **kein**, Swedish **ingen**), for which our equivalent is **zero**, e.g.:

   **An habe zero valuta** = He hasn't any money

(ii) In **positive questions** either **any** or **some** may be replaceable by **a bit of** or **a section of** and are then partitive, on all **I** fours with the French **de**. **We** can then translate them by **mero** (or by the corresponding pronouns **mero re** and **mero mil**), e.g.:

   **Que tu habe mero pani** = Have you any bread?
(iii) In positive questions either *any* or *some* may be empty words, replaceable by *a* or *one* before a singular noun or unnecessary before a plural one. We can then translate them by *un* or *plu*:

**Que tu habe u negotio-pe in Paris** = *Have you any agent in Paris?*

**Que tu pre vise plu equi** = *Did you see some horses?*

(iv) In positive statements *any* and *some* are not interchangeable. *Some* may be partitive (*mero*). It may be empty (*un* or *plu*). It may imply a contrast (*some . . . others*). When it implies a contrast between *one sort of* or *one class of* in contradistinction to *all* we can translate it by *geno*, which is roughly equivalent to the French *quelque*. Thus we have:

**Fe pre habe mero pani** = *She had some bread*

**Fe habe plu equi** = *She has some horses*

**Geno pani habe leuco** = *Some bread is white*

(v) In positive statements *any* is usually replaceable by *any ... whatever*, which may have the same meaning as *any ... at all* in a positive question. This implies the removal of a limitation equivalent to *a single* (*mono*) . . . *without restriction of choice* (*minus electio limito*) or *even a = everyone including* (*pan pe cleisto u or pan re cleisto u*). As such its range extends to all (*pan*). So we have:

Tu posso **acte electio mono billeta minus limito** = *You may choose any card (whatever)*  
**Pan cani poto acte re** = *Any dog can do so*

(vii) In a positive question the removal of restriction implicit in anywhere replaceable by *any . . . whatever (=any . . . at all)* may mean the same as *even a little* (*iso mega de micro*) or *even a single* (*iso mega de mono*), fading into *a little* (*micro*) or *a few* (*oligo*). In general the context makes the qualification sufficiently explicit, and we can then translate *any* or *some* by *un* or *plu*. What applies to the articles *any* or *some* as articles applies to the pronouns. Thus *anyone* or *anything* may mean *all persons* or *all*
things in one context and at least one person or at least one
thing in another. As a pronoun, the meaning of any or of some is
often partitive (mero re or mero mu); but something or some-
body may mean respectively a class of things (geno re) or a sin-
gle person (pe alone or mono pe).
Whatever is equally troublesome. It may have the following
meanings:
(i) As adjective or pronoun it may be merely an emphatic inter-
rogative like whoever and whichever in analogous situations; and
as such is equivalent to quo or quo re, e.g. :
Quo re eque u para re = Whatever is this?
(ii) As adjective or pronoun it may replace each (singulo) or all
(pan), as may whoever or whichever, e.g. :
Singulo re; an dicte; habe erro = Whatever he says is wrong
(iii) As an adverbial qualifier of any, its function is purely em-
phatic in negative statements; and zero X covers the meaning of
no X whatever, no X at all, not . . . any X whatever, not . . . any
X at all.
(iv) As an adverbial qualifier of any in positive statements or in
questions of either sort, it has the same force as at all. Either
combination (any . . . whatever or any . . . at all) implies the re-
moval of some limitation; but no single formula conveys what
sort of restriction they remove. Usually we can leave the qualifi-
cation to the context.
The difficulty of finding a suitable equivalent for such words as
any, some or whatever is not a difficulty inherent in Inter-glossa,
it is a difficulty inherent in English itself.
CHAPTER VI

Class VI: Amplifiers with Preposition- and Conjunction-equivalents: Time and Place Markers; and Auxiliaries (80)

The reason for separating words listed in this chapter from those listed in Chapter VII is that the latter do not transgress the threefold limits: (a) abstract noun, (b) adjective, (c) qualitative adverb. Amplifiers listed here slide into other grammatical niches. They may do the work of prepositions, conjunctions, or verbal auxiliaries.

In comparison with other artificial languages, the most peculiar feature of Interglossa is in line with recent evolution of Anglo-American and with the idiom of Chinese. Interglossa achieves a high grade of word-economy by combining two principles:

(i) Any adverb-preposition is one unit in a cluster of words with a single diffusely abstract focus of meaning distributed in different formal elements according to context as substantive, adjective, adverbial qualifier, or conjunction (link). Although we distinguish between during (prep.) and while (link), one word before does service for preposition-adverb (directive) and link.

(ii) Its rigid word-order and the use of empty particles as signposts of sentence-landscape, leave the translator in no doubt about the choice of the correct formal equivalent to one and the same vocable of Interglossa.

One example will suffice to illustrate word-economy made possible in this way. The semantic content of the word before in a temporal sense is antecedent time. If we can speak of the above statement we could speak with equal propriety of the previous statement as the before statement. If we can speak of the beyond, why not the before-now, i.e. what is previous, the past, the antecedent? If we can say the above-mentioned, why not the before-mentioned for previously mentioned? We have here a cluster of word-forms, past, history, antecedents, antecedent, preceding, previously), formerly), earlier, all with the same general notion of time antecedent-to-a-fixed point (nu) inherent in the context. The single word pre and its compound pre-nu stand for all these homosemes, and for what is essentially inherent in the simple past flexion of the English verb.

The rules for using it are:
(i) Placed between the subject and the verboid, or if the latter has no subject immediately in front of it, *pre* signifies action or state antecedent to the context of the situation. The couplet therefore has the force of the simple past tense or past participle. As such, *pre* need not come again in a subordinate clause or in a narrative, when the context makes it clear that the whole situation is past; and it is not necessary if another particle of time points to the oast.

\[
\begin{align*}
\text{Na pre date re a tu} &= \text{We gave it to you} \\
\text{Mi date re a tu pre-di} &= \text{I gave it to you yesterday}
\end{align*}
\]

(ii) If the pronoun, noun or noun cluster is the fixed point of time reference, *pre* precedes the article which labels the former or its pronoun-equivalent:

\[
\begin{align*}
\text{Mi kine apo pre fe} &= \text{I go away before her} \\
\text{Mi pre kine apo pre fe} &= \text{I went away before her}
\end{align*}
\]

(iii) If *before* introduces a subordinate clause it does so in accordance with the rule given under *punctuation* (p. 39), viz. :

\[
\text{Mi pre kine apo; pre fe kine para}
\]

I went away before she came here

(iv) After the article or possessive oseudonvm we have :

\[
\begin{align*}
\text{u tele pre} &= \text{the remote past} \\
\text{u pre-mi de tu} &= \text{your antecedents, your history} \\
\text{u pre questio} &= \text{the previous question}
\end{align*}
\]

Two devices promote *space-economy* within the framework of general principles laid down in Chapters I-II:

\[
\begin{align*}
(a) \text{Abstract words which have no substantival equivalent listed below require no article before a noun-equivalent (p. 84).} \\
(b) \text{Any abstract which stands for a *relation* (as opposed to a *quality* or *action*) can have a *prepositional* as well as an adjectival value: but not all have noun-equivalents, e.g. :}
\end{align*}
\]

\[
\begin{align*}
\text{boreo France} &= \text{north of France} \\
\text{u boreo mero de France} &= \text{the north of France} \\
\text{latero domi} &= \text{on one side of the house} \\
\text{u latero mero de domi} &= \text{the side of the house}
\end{align*}
\]
compare mu acte = in comparison with their behaviour
congruo u para re = corresponding to this one
harmono mi proposo = in accordance with my suggestion

In what follows, separate columns give preposition-, conjunction-, adverb-, adjective- and noun¹-equivalents. We can dividethem conveniently as follows: (a) time markers, (b) place markers and vectors, (c) associative particles, (d) auxiliary amplifiers.

The equivalent preposition given in the second column of (a), (b), (c) below does not always correspond with English usage. The value cited is the most characteristic one. In is a place marker, and thus corresponds to the most characteristic value of in, i.e. A is in B when B encloses or surrounds A. So defined, in does fit into a variety of idiomatic situations in which in has no spatial significance, e.g. in winter, in writing, in difficulties, in particular, in case of. Likewise epi is a place marker. *As such it is equivalent to on when on points to surface relationship as in on the table or on the wall. Obviously, epi is not equivalent to on in on holiday. Here on signifies contemporaneity, and the equivalent word is tem.

Some English particles have no single characteristic meaning. Thus with may mean in the company of (syn), by means of (per) or because of (causo), as in wrinkled with age. By may mean by means of (per), or near or beside (proximo) ; and it may also point to the personal agent or source (ex), as in a book by- Shaw. For may mean on behalf of, for the benefit of, in support of (pro), with a view to (tendo), or as a means of (functio). As may mean the same as because (causo), while (tern), like (homo), or equally (iso). An interlingua designed in accordance with semantic principles cannot list single equivalents for such words. Any difficulties the beginner has to overcome are difficulties inherent in the native tongue rather than of the constructed language.

¹ The reader who finds this feature puzzling should try substituting (as often happens in careless or uneducated speech) the abstract noun for the corresponding preposition or conjunction, e.g. time I went to London I got flu shows that when has no function in this context other than to introduce the time concept. Similarly we should immediately recognize position as the equivalent for where if anyone said: I don’t know position he puts it.
### (a) TIME MARKERS

<table>
<thead>
<tr>
<th>Preposition</th>
<th>Conjunction</th>
<th>Adverb</th>
<th>Adjective</th>
<th>Noun</th>
</tr>
</thead>
<tbody>
<tr>
<td>(61) Anni in the year</td>
<td>—</td>
<td>yearly, annually</td>
<td>—</td>
<td>year, annually, yearly, annually,</td>
</tr>
<tr>
<td>(62) chron at</td>
<td>when</td>
<td>—</td>
<td>—</td>
<td>chronological</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>occasion (time)</td>
</tr>
</tbody>
</table>

Note the following:

- **hetero chron** = another time (259)
- **u para chron** = this time, then (94)
- **pan chron** = always, whenever (15)
- **u chron** = any time, ever (12)
- **pre normo chron** = early; premature (73) (325)
- **post normo chron** = late; delayed (72) (325)

| (63) di on the day   | daily       | diurnal, daily     | day                    |
|                      |             |                     |                        |
| hepta di = a week    |             |                      |                        |
| meso di = midday, noon |           |                     |                        |

| (64) duro —          | —           | —                    | —                      | still, persistently              |
|                      |             | —                    | —                      | persistent, continuous, incessant|
|                      |             | persistence,         |                        |
| no-duro = cessation   |             | (adv.) no longer, no more |                        |

| (65) eo on the morning of | —           | in the morning      | morning                |
| (66) hespero on the evening of | —           | in the evening    | evening                |
| (67) hora at the hour of  | —           | hourly              | hour                   |
| quo hora = what is the time? |             |                     |                        |

| (68) mensi in the month of | —           | monthly              | month                  |
| (69) mini —               | —           | a minute             | minute                 |
(70) **nocti** on the night of

<table>
<thead>
<tr>
<th>Preposition</th>
<th>Conjunction</th>
<th>Adverb</th>
<th>Adjective</th>
<th>Noun</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>nocti</strong></td>
<td>—</td>
<td>nightly</td>
<td>night(ly) nocturnal</td>
<td>night</td>
</tr>
<tr>
<td>meso-nocti</td>
<td>= midnight (91)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(71) **nu(n)** —

| — | now, at the present time |
| — | present time |
| — | no-nu = extinct |

(72) **post** after

| after | subsequently, then | subsequent, succeeding |
| —     | —                  |

Note the following:

| post-nu   | = future, henceforth, in future |
| post meso-di | = this afternoon (future) (91) |
| post-di   | = to morrow |
| post-hora | = in an hour (similarly) with mini, seci |
| post-nocti | = to-night |
| post-anni | = next year; post-mensi = next month |
| post hepta-di | = next week |

(73) **pre** before

| before | previously | previous, past |
| —      | —          |

Note the following:

| pre-nu   | = ago (e.g. bi pre-nu mensi = two months ago); the past, antecedents |
| pre-anni | = last year (similarly with hepta-di and mensi) |
| pre-di   | = yesterday |

(74) **seci** —

| — | a second | second | second |
| — | iso-seci = at that instant, instantaneous(ly) | — | — |
Note on Time.—in Aryan languages one word may do for the two concepts of duration or interval (tem), signifying extent of time, and the occasion or instant in the time sequence (chron). Tem and chron tally with the two analogous space markers, viz.: place or territory (loco) and position (topo). Thus tem is Danish tid, and chron is Danish gang. Time markers of Interglossa do not ordinarily require an article where the equivalent Aryan construction is a "noun," since each has the status of an adverbial particle. Thus it is always redundant to translate on, at or in before any of the above or their compounds. **Chron** means at in such situations as :

**Pan homini habe libero chron u nato**

*All men are born free* (i.e. All men have freedom at birth)

Since there is no international calendar, we use (as in correspondence) numbers to indicate the days and months:

\[
\text{mono tetra di penta mensi} = \text{(on) the fourteenth of May}
\]

Similarly with daytime:

\[
\text{penta hora bi zero mini} = \text{(at) twenty past five}
\]

\[
\text{tri plus hemi hora} \quad \text{— half-past three}
\]
(b) PLACE MARKERS AND VECTORS

All the abstract words under this heading involve the general notion of position (topo) or direction (tendo). The meaning of (76) and (82) extends to change of any sort. Thus with muto (314) we have muto ex Y ad Z = change from Y to Z. Only topo can replace a substantive. To clarify the meaning of habe couplets such as habe in (be inside), we therefore indicate the abstract content under the heading "noun" with italics and quotes. Where we use the inside, the outside, etc., as nouns, we might equally well write the inner part, the outside part, etc. We can translate such expressions by un in mero de, un extra mero de and analogous constructions, e.g.:

un antero mero de apo domi = the front of that house
u retro mero de para alto mura = the back of this high wall

<table>
<thead>
<tr>
<th>Preposition</th>
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<th>Adverb</th>
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<tbody>
<tr>
<td>(76) ad</td>
<td>to, toward(s)</td>
<td>—</td>
<td>—</td>
<td>—</td>
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<td></td>
<td></td>
<td></td>
<td>a-chron</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>till, until</td>
<td></td>
</tr>
<tr>
<td>(77) antero</td>
<td>in front of, before</td>
<td>—</td>
<td>in front</td>
<td>anterior</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ad-antero</td>
<td></td>
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</tbody>
</table>
In conformity with Cartesian conventions we can use *dextro* for *positive* in contradistinction to (88) *laevo* = *negative*. In conformity with widely current political usage we can likewise use *dextro* and *laevo* respectively for *conservative* (right wing) and *advanced or progressive* (left wing).

Note.—Ex is also the marker of the personal agent as origin or source, e.g.:

* u bibli e Bernard Shaw = a book by Bernard Shaw

---

**Preposition** | **Conjunction** | **Adverb** | **Adjective** | **Noun**
---|---|---|---|---
(78) *apo* | away from | — | over there, away, outwards | —
(79) *boreo* | (to the) north of | — | north | north | —
    *a-boreo = northward* | *u boreo mero (de) = the north (of)*
(80) *contra* | opposite, facing | — | obversely | obverse | “being facing”
(81) *dextro* | to the right of | — | (to the) right | right | “being to the right”

In conformity with widely current political usage we can likewise use *dextro* and *laevo* respectively for *conservative* (right wing) and *advanced or progressive* (left wing).

(82) *epi* | on | — | — | — | “surface relationship”

(83) *e(x)* | from | whence | thence | — | —

Note.—Ex is also the marker of the personal agent as origin or source, e.g.:

* u bibli e Bernard Shaw = a book by Bernard Shaw

(84) *extra* or *ecto* | outside | — | out, outside, externa | outside, externally | “surface relationship”

    *ad-extra = outward* | *un extra mero (de) = the outside (of), the exterior (of)*

(85) *hypo* or *infra* | below, under, beneath | — | below, under, lower, beneath | inferior | “belowness”

    *ad-hypo = downward* | *un hypo mero (de) = the bottom (of), the base (of)*
<table>
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<tr>
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<th>Noun</th>
</tr>
</thead>
<tbody>
<tr>
<td>(86) in</td>
<td>in, inside</td>
<td>in, inside, internally</td>
<td>inside, inner, internal</td>
<td>“insideness”</td>
</tr>
<tr>
<td>(87) inter</td>
<td>between</td>
<td>—</td>
<td>—</td>
<td>intervening</td>
</tr>
</tbody>
</table>

- un inter vacuo = the gap, the interstice
- inter X syn Y = between X and Y

See note to (81) above

| (88) laevo  | (to the) left | (to the) left | left | “being on the left” |

| (89) latero | at the side of | — | laterally | side, lateral | “lateral relationship” |

- a-latero = to the side of
- u latero mero (de) = the side (of)

See note to (81) above

| (90) littora | at the edge of | — | at the edge | bordering | — |

- u littora mero (de) = the edge (of the)

| (91) meridio | (to the) south | — | south | south | — |

- a-meridio = southward
- u meridio mero (de) = the south (of)

| (92) meso | in the middle of | — | midway, in the middle | middle | — |

- u meso mero (de) = the middle (of), waist

Note:— We can use meso as a scale marker to indicate a midway grade as in meso thermo = warm (437).

| (93) occidento | (to the) west | — | west | west | — |

- ad-occidento = westward
- un occidento mero (de) = the west (of)
<table>
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<th>Adjective</th>
<th>Noun</th>
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</thead>
<tbody>
<tr>
<td>(94) oriento</td>
<td>(to) the east of</td>
<td>—</td>
<td>east</td>
<td>east</td>
</tr>
<tr>
<td></td>
<td>ad-oriento = eastward</td>
<td>un oriento mero (de) = the east (of)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(95) para</td>
<td>—</td>
<td>—</td>
<td>here, hither</td>
<td>present</td>
</tr>
</tbody>
</table>

**Para** expresses nearness to the focus of interest. In colloquial discourse this is the locus of speaker or writer. **Para** then means *here*. In sustained narrative it is any part of the situation which engages the immediate attention of the reader, then doing the job of *there*. *Mutatis mutandis* we may use **nu** for *now* or for *then*.

<table>
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<tr>
<th>Preposition</th>
<th>Adverb</th>
<th>Adjective</th>
<th>Noun</th>
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</thead>
<tbody>
<tr>
<td>(96) peri</td>
<td>around, round, (about)</td>
<td>—</td>
<td>around</td>
</tr>
<tr>
<td></td>
<td>a-retro = backward</td>
<td>—</td>
<td>behind</td>
</tr>
<tr>
<td></td>
<td>u retro mero (de) = the back (of)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(97) retro or dorsi</td>
<td>behind</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>a-supero = upwards, up</td>
<td>u supero mero (de) = the top (of)</td>
<td>—</td>
</tr>
<tr>
<td>(99) tele or ultra¹</td>
<td>far from</td>
<td>—</td>
<td>in the distance, remote</td>
</tr>
<tr>
<td>(100) topo</td>
<td>at (in, on)</td>
<td>where</td>
<td>there</td>
</tr>
</tbody>
</table>

**Note.**— **Topo** is the general particle of space relationship and may do the work of *in* or *on* where the context makes the nature of the relationship sufficiently explicit, e.g.:

**topo u via = in the street**

(101) trans | across | — | — | traversing | — |
| trans longo = wide | — | — | — | — |
| u metro de longo trans = width (of) | — | — | — | — |

¹ It might be advantageous to reserve ultra for beyond (see p.262)
(c) ASSOCIATIVE PARTICLES

These include abstracts of instrumentality and association which are not specifically of a temporal or spatial character.

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</tr>
</thead>
<tbody>
<tr>
<td>(102) allo</td>
<td>—</td>
<td>or, either</td>
<td>alternatively</td>
<td>alternative</td>
</tr>
</tbody>
</table>

The function of *allo* is to specify a choice between exclusive possibilities, i.e. when acceptance of one involves rejection of the other or others. For *either* » . or we use *allo . . . allo*. For *neither . . . nor. zero . . . zero*. By itself, *neither* means *none*, and is equivalent to *zero re or zero pe*. By itself, *either* means *either the one or the other = allo mono re (or pe) allo u residuo re (of pe).*

2 Similarly we use *minus . . . minus* for *without ... or*. See also *footnote* to (105).

(103) *anti* in spite of, contrary to, against although contrariwise contrary, opposing, inimical

*Note.*—*Anti* implies logical, physical or affective antagonism.

In general *but* and *although* have a reciprocal relation. We can simultaneously eliminate the latter at the beginning of the so-called subordinate clause and introduce the former at the beginning of the so-called principal clause without change of meaning [although she was ill, she went On working = she was ill, but she went on working). The function of *although* or *but*, if used with discrimination, is to draw attention to an inherent contrast or antithesis (in Hegelian jargon an internal contradiction). Although anticipates the antithesis from the start:

\[
\text{Anti patho fe pre duro acte ergo}
\]

*In spite of her illness she went on working*

We can delay the signal of forthcoming antithesis by using the construction *anti re* — in spite of it (but, nevertheless, notwithstanding, all the same), e.g.:

\[
\text{Fe pre habe patho. Anti re, fe pre duro acte ergo}
\]

*She was ill. All the same, she went on working*
Cleisto and its opposite no-cleisto supply equivalents for the over-worked English words, only and even.¹ When even precedes a substantive cluster beginning with an attributive adjective other than a numeral, its usual meaning is all . . . including. In the same situation only means no . . . except, but English usage offers no clue to whether the inclusion or exception refers to the epithet or to the noun. According as we put the stress in speech on the words green or apples, even green apples may mean:

- **pan pomi cleisto phi chloro re** = all apples, including green ones
- **pan re cleisto plu chloro pomi** = all of them, including green apples

Similarly, **only green apples** may mean:

- **zero pomi no-cleisto plu chloro re** = no apples except green ones
- **zero re no-cleisto plu chloro pomi** = nothing except green apples

When even and only immediately precede a preposition the meaning is closely akin:

- **pan loco cleisto in hydro** = even in water
- **pan tem cleisto blasto-tem** = even in spring
- **zero-lo no-cleisto in hydro** = only in water
- **zero tem no-cleisto blasto-tem** = only in spring
Note.—Anti implies logical, physical or affective antagonism.

In general **but** and **although** have a reciprocal relation. We can simultaneously eliminate the latter at the beginning of the so-called **subordinate** clause and introduce the former at the beginning of the so-called **principal** clause without change of meaning (**although she was ill, she went on working** = **she was ill, but she went on working**). The function of **although** or **but**, if used with discrimination, is to draw attention to an inherent contrast or antithesis (in Hegelian jargon an **internal contradiction**). **Although** anticipates the antithesis from the start:

**Anti patho fe pre duro acte ergo**

*In spite of her illness she went on working*

We can **delay** the signal of forthcoming antithesis by using the construction **anti re** = **in spite of it** (**but, nevertheless, notwithstanding, all the same**), e.g.:

**Fe pre habe patho. Anti re, fe pre duro acte ergo**

*She was ill. All the same, she went on working*

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<tbody>
<tr>
<td><strong>anti</strong></td>
<td><strong>although</strong></td>
<td><strong>contrariwise</strong></td>
<td><strong>contrary, opposing, inimical</strong></td>
<td>—</td>
</tr>
</tbody>
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</thead>
<tbody>
<tr>
<td><strong>causo</strong></td>
<td><strong>because (since)</strong></td>
<td>—</td>
<td><strong>causal</strong></td>
<td>cause</td>
</tr>
</tbody>
</table>

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<th>Adjective</th>
<th>Noun</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>cleisto</strong></td>
<td><strong>including, containing, enclosing</strong></td>
<td>—</td>
<td><strong>comprehensively</strong></td>
<td>inclusive</td>
</tr>
</tbody>
</table>

**no-cleisto** = **except, exception, excluding**
Cleisto and its opposite no-cleisto supply equivalents for the over-worked English words, only and even.¹ When even precedes a substantive cluster beginning with an attributive adjective other than a numeral, its usual meaning is all . . . including. In the same situation only means no . . . except, but English usage offers no clue to whether the inclusion or exception refers to the epithet or to the noun.

According as we put the stress in speech on the words green or apples, even green apples may mean:

\[
\begin{align*}
\text{pan pomi cleisto plu chloro re} &= \text{all apples, including green ones} \\
\text{pan re cleisto plu chloro pomi} &= \text{all of them, including green apples}
\end{align*}
\]

Similarly, only green apples may mean:

\[
\begin{align*}
\text{zero pomi no-cleisto plu chloro re} &= \text{no apples except green ones} \\
\text{zero re no-cleisto plu chloro pomi} &= \text{nothing except green apples}
\end{align*}
\]

When even and only immediately precede a preposition the meaning is closely akin:

\[
\begin{align*}
\text{pan loco cleisto in hydro-} &= \text{even in water} \\
\text{pan tern cleisto blasto-tem} &= \text{even in spring} \\
\text{zero-lo no-cleisto in hydro} &= \text{only in water} \\
\text{zero tem no-cleisto blasto-tem} &= \text{only in spring}
\end{align*}
\]

It is sufficiently explicit in this context to use cleisto by itself for even, and no . . . no-cleisto for only:

\[
\begin{align*}
\text{an acte re cleisto in hydro} &= \text{he does so even in water} \\
\text{an non acte re no-cleisto blasto-tem} &= \text{he does so only in spring}
\end{align*}
\]

When even and only precede a numeral, the latter means no more and no less than, and the usual significance of the former is as many as, see (45) and (44) above. As an adverb qualifying a verb, even may merely mean equally or also, and only may mean merely (no better than). Clearly no explicit single word can convey

---

¹ For both . . . and or whether . . . or whether we use cleisto . . . cleisto, which is often equivalent to either . . . or where no exclusive alternative is implicit.
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<th>Preposition</th>
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<th>Adverb</th>
<th>Adjective</th>
<th>Noun</th>
</tr>
</thead>
<tbody>
<tr>
<td>(109) <strong>de</strong></td>
<td>de</td>
<td>of, about, concerning, in relation to, with respect to</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

As a preposition-equivalent, **de** is an empty word, expressing *any* relation made sufficiently explicit by context. It is the normal possessive particle, e.g.:

\[
\text{plu ostea de plu no-nu zoa} = \text{bones of extinct animals}
\]

(110) **digito** or **indico**

|   | pointing to, indicating | — | — | indicative | indication |
| (110) **functio** | for (the use of) | — | usefully | functional, useful | function, use, utility |

**no-duro functio** = *derelict, desuetude, in abeyance*

*Note.* — **Use** may also mean *method of action or custom (vide infra)*:

(112) **harmono**

|   | according to, in accordance with | — | — | consonant, harmonious | agreement, harmony |

**non-harmono** = *discord, disagreement*

(113) **homo**

|   | like as similarly | similar | — |

**homo qualito** — *likeness, similarity* (385)

(114) **metro**

|   | in so far as, in the measure that, to the extent that | quantitatively | metrical | quantity, amount, extent |

(115) **minus**

|   | without | — | — | lacking | — |

**u minus metro** = *deficit, difference (of quantity)*

**u minus numero** = *deficit, difference (of number)*
(116) **pedo**

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<th>Noun</th>
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</thead>
<tbody>
<tr>
<td>hanging</td>
<td>—</td>
<td>—</td>
<td>hanging,</td>
<td>suspension</td>
</tr>
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</table>

(117) **per**

| by means of, | — | thereby | — | — |

**per via de-( = dia) = by way of, through** (668) (see p. 263)

**Per** requires no article before a collective. It takes the place of many Anglo-American prepositions 111 idiomatic constructions such as:

- **per chiri = by hand** (494)
- **per grapho = in writing** (249)
- **per copa = with oars** (745)
- **per poda = on foot** (536)

(118) **plus**

| in addition to | and | extra | — |

**Note.**—For use of *plus* as equivalent to *and*, see (123) below. *Plus* is one of several words which may stand for *other*. Thus we have (102) **allo alternate**, (258) **hetero different**, and (394) **residuo remaining**. When we use *another* as a pronoun, the usual meaning is *an additional one*, i.e. *mono plus re (or pe)*. For-*aw additional, an extra* we use *mono plus*. For-*aw extra, many extra, all additional, oligo plus, poly plus, pan plus*. Before a collective *extra, additional* are equivalent to *u plus metro de*; and before a plural *(the) additional, (some) extra* are equivalent to *u plus numero de*.

(119) **postulo**

| if, in case of | if, supposing that | supposedly, presumptively | supposition, postulate |

**Note.**—The correct translation *oiif* depends on whether we can replace it by *on condition that (conditio), supposing that (postulo) or whether*. The last raises a query/and we can represent it by *que* or omit it altogether:

```
Mi non habe sapio ; (que) fe kine apo
I don't know whether She is going away
```

Needless to say, postulo conveys the meaning implicit in the **should ox were to** construction without recourse to a special qualifier of the key verboid.
<table>
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</thead>
<tbody>
<tr>
<td><em>pro</em></td>
<td>—</td>
<td>favourably</td>
<td>—</td>
<td>favourable</td>
</tr>
<tr>
<td><em>proximo</em></td>
<td>—</td>
<td>nearly, roughly, approximately</td>
<td>near, rough, approximate</td>
<td>propinquity, proximity, approximation</td>
</tr>
</tbody>
</table>

*Note.* — *Proximo* signifies proximity of spatial, temporal, or any other sort of relationship.

| *sequo*     | —           | consequently | consequent, resultant | consequence, result, issue, sequel, conclusion, solution (answer) |

| *syn*       | and         | —           | present               | —                      |

no-syn = *absent*

*Note.* — "Whether we use *plus* or *syn* for *and* is not of great importance. Strictly, we should use *plus* when *and* means *in addition to (this)*, *syn* when *and* means *together with (this).* The following constructions are important:

- syn recip *pro* = *together*
- syn zero re *re* = *by itself, alone*

| *tacto*     | touching, in contact | — | — | contact, touch |

"Whether we use *plus* or *syn* for *and* is not of great importance. Strictly, we should use *plus* when *and* means *in addition to (this)*, *syn* when *and* means *together with (this).* The following constructions are important:

- syn recip *pro* = *together*
- syn zero re *re* = *by itself, alone*
Preposition       Conjunction       Adverb       Adjective       Noun

(125) tendo     with a view to (for)     in order that     deliberately, intentionally     deliberate, intentional     tendency, aim, intention, will, direction

no-tendo = aimless(ness),unintentional

(126) verso       —     —         back     reverse     restitution, reversion, reversal

no-verso = irreversible, irrevocable, inalienable

Note.—Verso is the qualifier which often does the work of re-, e.g. in return, regain; but re- may signify repetition, e.g. restate, rewrite, for which we use itero (272).

(127) vice       instead of, in place of     —     —         vicarious     substitution

u vice-re or u vice-pe = a substitute
u vice de Y per Z = the substitution of Z for Y
syn sequo vice postulo = conversely

(128) volo       rather than     —     —         desirous, wishful     wish, desire, preference

no-volo = unwilling(ess)
Compound Associative Conjunctions and Subordinate Clauses

(a) To facilitate construction of short sentences sustaining a logical sequence, it is advantageous to have conjunctive adverbs which refer back to the meaning of the previous one, as when we say in English *in spite of it*. In this construction *it* (re) stands for what has gone before. The following are samples of many analogous couplets which we can form for use at the beginning of a new sentence:

- **anti re**  however, notwithstanding, but, yet, all the same, nevertheless
- **causo re**  for this reason, consequently, hence, therefore
- **cleisto re**  even so
- **contra re**  conversely
- **harmono re**  accordingly
- **hetero re**  otherwise, contrariwise (259)
- **homo re**  similarly
- **metro re**  to that extent
- **no-cleisto re**  apart from that, excluding that
- **per re**  in that way
- **plus re**  besides, moreover
- **post re**  afterwards, after that
- **syn re**  also
- **tem re**  meanwhile

(b) In a clause of extent, *that* points-to the consequence, hence *sequo*:

- **Re habe iso alto; sequo re post acte gravito**
  It is so high that it will fall down

It is rarely necessary to imitate English usage by recourse to the construction *iso (or homo) . . . sequo (so . . . that) . . .*. We can usually express the same thing in a nominal construction by reversing the emphasis:

- **Re post acte gravito hypo causo un alto**
  It will fall on account of its height

In general, a nominal construction is the best way of translating a clause of comparison or contrast. For instance we can say:

- **Re no habe iso mega de an pre moro esthe credo de re**
  It is not as big as he used to believe
- **Re habe micro de pre credo**
  It is small in relation to his former belief

Similarly we may say:

- **Re habe major de an pre moro esthe credo**
  It is larger than he used to believe
- **Re habe mega de pre credo**
  It is large in relation to his former belief
No semi-colon is necessary to mark the boundary of a clause of comparison, contrast or extent.* The wording would be exactly the same if we translated the equivalent English gerundial construction,

(d) AUXILIARY AMPLIFIERS
We have seen (p. 49) that *pre, nu, post,* in front of the verboid have the force of tense flexions or tense auxiliaries. The use of other amplifiers as intransitive *modal or aspective* auxiliaries is in line with this device. At the beginning or end of a statement any one of the succeeding amplifiers (129-140) istan adverb-equivalent, as specified, qualifying the whole situation which involves the action or state predicated by the verboid. In juxtaposition to the latter the preposited particle limits the meaning of the verboid alone, forming with it a new semantic unit which predicates a judgment concerning the possible occurrence or desirability of the action or state. Two of them (posso and poto) exclude the notion of actual occurrence in a positive statement We can put them immediately before the verboid or elsewhere without affecting the meaning of an affirmative statement:

\[
\begin{align*}
\text{An pre posso acte re} & = \text{He may have done so} \\
\text{Posso an pre acte re} & = \text{Perhaps he did so} \\
\text{An poto acte re} & = \text{He can do so} \\
\text{An acte re poto} & = \text{He does so potentially}
\end{align*}
\]

When posited as qualifiers of an affirmative statement as a whole, the other members of the ensuing set pass judgment on an actual occurrence. A statement so constructed therefore carries a meaning different from that of one in which the qualifier-verboid couplet merely predicates judgment concerning the occurrence in general. Thus :

\[
\begin{align*}
\text{An pre debito acte re} & = \text{He ought to have done so} \\
\text{An pre acte re debito} & = \text{He did so rightly} \\
\text{An pre tendo acte re} & = \text{He intended to do so} \\
\text{An pre acte re tendo} & = \text{He did so intentionally} \\
\text{An pre hedo acte re} & = \text{He liked doing so} \\
\text{An pre acte re hedo} & = \text{He did so with pleasure} \\
\text{An pre volo acte re} & = \text{He wanted to do so} \\
\text{An pre acte re volo} & = \text{He did so by choice}
\end{align*}
\]

The contrast between the two uses comes out more sharply in negative statements. The qualifier*of the statement as a whole then passes judgment on the fact that the action did not occur or the state did not exist; and the negative particle is the mark of its non-occurrence or non-existence. When the negative particle qualifies an auxiliary couplet, it denies the valuation which it predicates. Thus we have :

\[
\text{An no pre permito acte re} = \text{He was not allowed to do it}
\]
An no pre acte re permite = He was allowed not to do it
An no pre posso acte re = He could not have done it
Posso an no pre acte re = Perhaps he did not do it

None of the amplifiers listed below has the force of a transitive auxiliary. For all transitive auxiliary constructions we use the appropriate verboid-amplifier couplet. Thus we say:

Mi esthe volo an acte re = I want him to do it, I wish him to do it
Mi dicte permito fe acte re = I let her do it, I allow her to do it

Anglo-American allows us to express great variety of meaning by relying on the rule of proximity alone. Thus the three following combinations of the same four vocables convey three different sorts of information: (a) only he said that; (b) he only said that; (c) he said only that. In the second, only said is a semantic unit which excludes the possibility that he wrote or cabled it. If we interpret it in this way only is a pure verb qualifier. Even so, few recognize it as such, unless helped by tone or context. Anglo-American has no consistent rule to implement the text-book distinction between an adverb which qualifies a verb and one which qualifies a whole statement. It is immaterial whether we say: (a) often he thought; (b) he often thought; (c) he thought often. Because, and only because, our own language permits this licence, our first reaction to the use of adverbial particles as modal auxiliaries is to regard such a device as a deviation from semantic rectitude. This reaction conceals a misconception about the scope of linguistic engineering. A constructed language of the isolating type is free to exploit the semantic possibilities of word-order to the fullest possible extent in the service of word-economy. Interglossa does so. A vocable of Interglossa occupies its place in the sentence-matrix BECAUSE IT HAS A DEFINITE FUNCTION THERE AND ONLY THERE. A qualifier of a statement as a whole must come: (a) like a word^qualifier, immediately before what it qualifies, i.e. at the very beginning; (b) as an afterthought, marked as such by a comma in print, at the very end. Accordingly, the allocation of the same qualifier to a situation immediately in front of the verboid must mean that it passes judgment specifically on the latter. What we predicate of the subject is no longer the action or state implicit in the verboid with or without some goal of action. It now becomes a valuation of a possible happening in contradistinction to the valuation placed on an event, when the same qualifier limits the meaning of a complete statement.

Conditional Use of Auxiliaries,—Auxiliary constructions peculiar to Anglo-American usage are should have, would have, could have, etc., followed by the so-called past participle. There is no single Interglossa construction equivalent to any one of them, because any one of them can convey several different notions according to the context in which it occurs or the tone of voice of the speaker. He would have liked Y may mean (inter alia):
(a) Y is the sort of thing he likes

Y eque geno re; an esthe hedo (or volo)

(b) He did not have the opportunity of enjoying Y

An no pre hafoe occasio de hedo Y

Similarly, he could have done Y may mean (inter alia):

(a) Given the chance, he had the ability to do Y,

Postulo un occasio, an pre poto acte Y

(b) He had the ability to perform Y without the inclination

Anti poto, an no pre volo acte Y

(c) He used to have, but no longer has, the power to perform Y

Anti pre poto, an no nu poto acte Y

CHAPTER VII . .

CLASS VII. GENERAL AMPLIFIERS (335)

The amplifiers listed in this chapter can be equivalent to noun or adjective specifying the same abstract property, state or action, and to the corresponding adverb. Where the latter is a -ly derivative it is not necessary to give it. The vocable of *Interglossa* for any adverb of the -ly type is the same as for its adjectival co-twin. It is commonplace that almost any Anglo-American “noun” can do the job of an adjectival form, as in colour film, trade cycle, conciliation board, tooth paste; but the same abstract notion may be present in several adjectival forms, distinguished by the participial endings -ing, -ed, or by such suffixes as -fid, -some, -ly, -at, -hie. It would be easy to lay down a straightforward rule for choice of an appropriate Anglo-American adjectival form equivalent to a given amplifier, if such affixes had a clear-cut meaning. Not one of them has a clear-cut meaning. Even the -ing, -ed endings do a variety of tasks. While it is true to say that -ing and -ed commonly label active and passive, it is not true to say that they do so invariably. To hang a rope is to suspend it; but a hanging rope is also a suspended one. The three rules we follow in *Interglossa* are in line with the reservation (pp. 45-47) of specific operators for physical states, actions, communications, and sentiments.

(a) If the amplifier stands for a valuation, e.g. guilt, or for a physical state, e.g. redness or colour, the equivalent adjectival form restricts the
class denoted by the substantive it qualifies to those of its members which possess (habe) or retain (tene) the attribute. Thus, the adjectival form corresponding to redness is red, and to colour, coloured. If preposited as a qualifier, an amplifier which stands for a physical state therefore has a passive flavour, and as such does not need ge unless to emphasize that the topic qualified acquired the state at some previous time (e.g. ge thermo = heated).

(b) If the amplifier stands for a physical reaction such as cracking, for an action such as writing or a behaviour pattern (i.e. related class of actions) such as friendship, or for a communication such as warning, its adjectival use limits the class denoted by the substantive it qualifies to those’ of its members who execute (reacte) the reaction, perform (acte) the action, or transmit (dicte) the message. Thus the adjectival form which

corresponds to writing is also writing; for friendliness it is friendly; for advice it is advisory.

(c) The two preceding rules tally with the disappearance of a formal noun-adjective distinction in Anglo-American usage. Where a name stands for a sentiment or physiological state, Anglo-American commonly offers us two adjectival forms, one predicating the property of evoking (e.g. annoying or endearing), the other predicating the property of experiencing (e.g. angry or loving) it. Apart from how often we have recourse to one or the other, there is no obvious reason for preferring the latter to the former, or vice versa., Our one-way traffic regulation regularizes transferred epithet, i.e. an amplifier preposited as a substantive qualifier limits the substantive class:

(a) To members who experience (esthe) the sentiment or physiological state when the former is a creature or a class of creatures;

(b) To members who evoke (stimule) the sentiment when the substantive is not a creature or class of creatures.

Hence we have:

<table>
<thead>
<tr>
<th>Noun</th>
<th>Adjective</th>
<th>Pronoun</th>
</tr>
</thead>
<tbody>
<tr>
<td>philo</td>
<td>loving</td>
<td>suffering</td>
</tr>
<tr>
<td>algo</td>
<td>endearing</td>
<td>painful</td>
</tr>
</tbody>
</table>

The uncertainties of the affixes mentioned above are-numberless. Thus a loving wife is a wife who experiences the sentiment denoted by
the root, and an annoying husband is a husband who evokes it. A hateful experience is one which confers or evokes the sentiment of hate, and a colour/w/ picture is one which abundantly possesses the property of colour. A compressed gas possesses the state of compression, and a sounding brass is one which possesses the state of physical vibration. The -ing terminal may merely indicate becoming or beginning. In keeping with rule (a), the adjectival form appropriate to morto (death) is dead. Proto morto means dying. The reason for this chaos of adjectival endings in natural languages is easy to see. The form of words antedates by centuries or by millennia our present knowledge of the qualities for which they stand.

As a corollary of the three rules given, the Interglossa equivalent for many adjectives is a combination of the basic amplifier with a preposited qualifying amplifier or verboid. A hateful person is someone who evokes hatred (su stimule miso). A hateful occurrence is a hate-evoking one (u miso accido). The contents of the adjectival affixes -able and - -worthy are as variegated as those of others mentioned. Thus breakable means easily broken (or breaking) = facilo fracto.

A better equivalent is sensitive (de fracto), the part in parentheses being usually made explicit enough by context alone. We can often render negative derivatives with the terminal -able by recourse to the constructions A-resisto or resisto de A (postposed), comparable to our own couplets heat-resistant or resistant to heat, as for instance:

resisto de baro = incompressible (157)
resisto de console = inconsolable (184)
resisto, de pyro = non-inflammable (384)
resisto de victo = unconquerable (454)

As applied to a person, lovable means endearing = su stimule philo. When we apply endearing to an occurrence or thing which ipso facto cannot experience philo, the operator stimule is redundant v Sometimes -ble points to potentiality -(poto ge lecto = readable). Sometimes, like -worthy, it specifies particular valuation. We can then regard the abstract notion as a qualification to the worthiness of the topic and make a couplet of the pattern laudo valo or valo de laudo = praiseworthy. When the abstract notion is an action performed only by a living being, no ambiguity arises from dropping out valo in a substantive cluster of which the
terminal element is inanimate, e.g. u bibo (valo) hydro = drinking (i.e. drinkable) water; plu phago phyta = edible (food) plants.

The following table, in which A stands for the nominal equivalent (e.g. heat, writing, advice, love) first given for the amplifiers which follow, summarizes the rules:

<table>
<thead>
<tr>
<th>Semantic Domain</th>
<th>Preposited as Qualifier of Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Valuation or physical state</td>
<td>A—possessing  A—retaining</td>
</tr>
<tr>
<td>(b) Action, behaviour or communication</td>
<td>A—performing  A—executing  A—expressing</td>
</tr>
<tr>
<td>(c) Physiological state or sentiment</td>
<td>(i) A—experiencing (creature)</td>
</tr>
<tr>
<td>(ii) A—evoking (thing or occurrence)</td>
<td></td>
</tr>
</tbody>
</table>

A few -o words here listed are not abstracts in the ordinary sense of the term (aero, anemo, hydro). The adjectival equivalent signifies the characteristic property (aerial, windy, aqueous).

Interglossa has two devices for emphatic negation, one attributive, the other predicative. Attributively, we can say that someone or some situation is unhopeful (non-espero) or —with greater emphasis—hopeless, without hope (minus espero). Predicatively, we can say he is not hopeful (an non esthe espero) or he has no hope (an esthe zero espero), the latter being more emphatic because the negation stands out more sharply in the sentence-matrix. The minus construction which is postposited also gives more emphasis to the negation than the no- compound; but the two are not always interchangeable in other respects. Thus no-catalyso (unhelpful) is not a less emphatic way of expressing minus catalyso (helpless). When the amplifier signifies an action or mode of behaviour, as opposed to a state or sentiment, the no- compound is active and the minus couplet may be passive, replacing no ge, to which it is preferable when the context would sufficiently label it as the equivalent.

(141) accido (noun) occurrence; happening; (existence); (reality)
(adj.) real
    non-accido = non-existence; unreality; unreal
    mal-accido = misadventure; failure; mishap; unsuccessful

(142) aero (noun) tip; summit; peak; point;
apex; climax (metaph.) (adj.) topmost; apical

(143) **activo** (noun) activity; vivacity; liveliness (adj.) active; lively; vivacious

**non-activo** = inert(ness), neutrality **activo pro** = enthusiasm, enthusiastic

(144) **acuto** or **oxyo** (noun) sharpness (of edge or point) (adj.) sharp (ditto)

**non-acuto** = blunt(ness) **acuto-re** = spur

(145) **adhesio** (noun) adhesion (adj.) adhesive; sticky; adherent

**auto-adhesio** = cohesion, coherent (phys.)

(146) **aero** (noun) air; atmosphere (adj.) aerial; atmospheric

(147) **actio** (noun) blame; guilt (sentiment or valuation) (adj.) blameworthy; guilty

**non-aetio** = innocence, innocent **auto-aetio** = shame, ashamed

(148) **algo** ; .. (noun) pain; ache; smart; suffering; hurt; (sting); (prick) (adj.) suffering (pers.); painful; aching; smarting (imp.)

(149) **alieno** or (noun) strangeness; unfamiliarity 
**xeno** (adj.) strange; unfamiliar; queer; odd

**non-alieno** = familiar (ity)

(150) **alto** (adj.) high; tall (on any scale)

**non-alto** = low

**u metro de alto** = height; pitch; level (on any scale)

(151) **amico** (noun) friendliness; kindness; (behaviour or sentiment) (adj.) friendly; kind

**non-amico** = unkind(ness); hostile; hostility

**n mico pro recipro** = friendship (between)

(152) **anemo** (noun) wind (adj.) windy,

**mega anemo** = storm(y); tempest(uous)
153) archo or (noun) authority
   aethorito (adj.) authoritative; official; (responsible)
   non-archo = unauthorised; unofficial

154) arrogo (noun) pride; arrogance
   (adj.) proud; arrogant
   non-arrogo = humble; humility; modest(y)

155) assuro or (noun) certainty; certitude; (assurance)
   certo (adj.) certain; sure
   non-assuro = uncertainty; doubt(ful)

156) attendo or (noun) delay; waiting
   tardo (adj.) delayed; postponed
   non-attendo = promptness)
   micro attendo = pause, hesitation
   plu attendo-re = arrears

157) baro (noun) pressure; compression
   (adj.) compressed

158) baso or evido (noun) grounds; evidence; reasons
   eu baso = justifiable; accredited
   u baso digito = the reason why

159) batho (adj.) deep (on any scale)
   no-batho = shallowness)
   u metro de batho = depth (on any scale) *

160) bibo (noun) drinking (adj.) drinkable

161) bio (noun) life (adj.) living; alive
   no-bio = dead; inanimate; lifeless
   u bio-re = a creature

162) blastooy (noun) budding; sprouting
   gemmo (adj-) ditto
   u blasto-re = a bud, rudiment

163) bronto or (noun) explosion; thunder
   explosio (adj.) explosive; detonating
   u bronto de urani = thunder (665)
   u bronto de gastri = belch, hiccough (506)
   u bronto de trachea = cough(ing) (527)
u bronto de nasa = sneeze, sneezing (523)
u bronto-ma = an explosive

(164) canto (noun) song; singing
(adj.) singing u canto-pe = a singer

(165) captivo (noun) capture=act of ; (catching); hunt(ing)
(adj.) snaring; catching
no-captivo = at large
u captivo-pe = captor, catcher
ge captivo = captive (adj.)
u ge captivo persona = prisoner, captive

(166) catalyso or (noun) help; assistance; aid; lubrication
lubrico (adj.) helpful; auxiliary; lubricant
no-catalyso '= unhelpful
non auto-catalyso = help(less)ness
u catalyso-ma = lubricant, catalyst

(167) cavito or (noun) cavity; hole (in ground) ; hollow
celo (adj.) hollow
no-cavito = solid(ity), i.e. not hollow—see also (428)
poly cavito = spongy, porous

(168) celebro or (noun) celebration; ritual; ceremony;
ceremonio rite, or rituo (adj.) ceremonial; ritual
no-celebro = informality), spontaneous(ness)

(169) celero or (noun) quickness; haste
veloco (adj.) quick; speedy; hasty
no-celero = slow (ness)
celero muto = sudden(ness); abruptness)
celero ratio = acceleration

Note:—Celero serves for speed or velocity as we use these terms in everyday speech, but in kinematics velocity is the position-time ratio with reference to a particular rectilinear co-ordinate in contradistinction to the path-time ratio or speed on the race track. Accordingly Ave need to distinguish:

u topo-tem ratio = velocity (kinemat.)
u via-tern ratio = speed (kinemat.)
(170) **certifo** (noun) certification (by test)
   (adj.) certified
   **no-certifo** = uncertificated
   **u certifo-pe** = a graduate

(171) **chloro** (noun) green (ness); verdure
   (adj.) green
   **u chloro-lo** = an oasis

(172) **cholo** or **iro** (noun) anger; (passion); (temper)
   (adj.) angry; irate (pers.); annoying; exasperating (imp.)
   **no-cholo** = calm(ness); unruffled

(173) **clioro** (noun) dance; dancing
   (adj.) dancing
   **u cloro-pe** = dancer
   **u cloro-do** = dance-hall, palais-de-danse

(174) **chromo** (noun) colour; hue; tint
   (adj.) colour (ed)
   **no-chromo** = colourlessness; pallid

(175) **claustro** or **angio** (noun) closure (state)
   (adj.) shut
   **no-claustro** = open—see also (867) p.186
   **u claustro-re** = a stopper, bung

(176) **clepto-** (noun) theft; robbery; stealing; plunder
   (adj.) robbing; thieving
   **u clepto-pe** = thief; robber; brigand; bandit

(177) **clino** (noun) dope; incline; inclination
   (abstr.) (adj.) sloping; inclined
   **u clino-lo** = a slope

(178) **cogito** or **ideo** (noun) thought; thinking; idea; reflection
   ‘Hon (adj.) thinking
   **no-cogito** = thoughtless (ness)
   **mega cogito** = thoughtful

(179) **coito** (noun) coitus; copulation; mating
   (adj.) mating; copulating
   **no-coito** = celibacy; ’celibate

(180) **comico** (noun) humour; wit; comedy; drollness
   (adj.) funny; humorous; witty
no-comico = humourless; (dull)
 u comico-pe = wag; wit; clown

(181) communo (noun) sharing; community (of property, sentiment, or relationship)
 (adj.) communal; (common)*; (mutual)
 u eommuno ergo = co-operation
 o communo de X syn Y = relation of X to Y

(182) competo (noun) competition; (race); rivalry (of sentiment or action) (adj.) competing; rival; competitive
 u sex competo = jealousy
 u competo-pe = a rival
 u bilieta competo = a lottery

(183) confessio (noun) confession; admission
 (adj.) confessing; admitted
 ge confessio = admittedly
 (u) pro confessio = (the) affirmative

(184) console (noun) consolation; (comfort)
 (adj.) comforting; consoling; soothing

(185) controlo or (noun) control; direction; steering;
 dirigo guidance
 (adj.) controlling; directing; guiding

(186) credito (noun) loan
 ` (adj.) lending
 u credito-pe = lender; creditor
 u ge credito pe = debtor; borrower

(187) credo (noun) belief; confidence; trust; (faith)
 (adj.) believing; trusting; confident
 (pers.) ; credible (imp.)
 no-credo = unbelief; incredulous; scepticism; sceptical
 valo de credo = trustworthy; reliable, reliability
 u credo-pe = believer
 (u) forto credo = conviction, convinced

(188) critico (noun) criticism; appraisal; discrimination
 (adj.) critical; discriminating
 no-critico = uncritical; undiscriminating
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>u critico-pe</td>
<td>= critic</td>
</tr>
<tr>
<td>un auto-critico</td>
<td>= conscience</td>
</tr>
<tr>
<td>cryo</td>
<td>snow(ing)</td>
</tr>
<tr>
<td>u gravito de cryo</td>
<td>= snowstorm</td>
</tr>
<tr>
<td>crypto</td>
<td>(noun) secrecy; mystery; concealment (adj.) secret; hidden; mysterious; concealed</td>
</tr>
<tr>
<td>u crypto-ve</td>
<td>= disguise, mask</td>
</tr>
<tr>
<td>culino v</td>
<td>(noun and adj.) cooking; cookery; baking; roasting</td>
</tr>
<tr>
<td>culino in hydro</td>
<td>= boiling (of food)</td>
</tr>
<tr>
<td>culino in lipi</td>
<td>=frying</td>
</tr>
<tr>
<td>culino epi pyro</td>
<td>= broiling; grilling</td>
</tr>
<tr>
<td>culino per vaporo</td>
<td>= steaming (of food)</td>
</tr>
<tr>
<td>culto</td>
<td>(noun) cultivation; rearing (adj.) (cultivating)</td>
</tr>
<tr>
<td>ge culto</td>
<td>= cultivated (of plants or animals)</td>
</tr>
<tr>
<td>u culto-pe</td>
<td>= cultivator (of the soil)</td>
</tr>
<tr>
<td>euro</td>
<td>preoccupation; concern; vigilance; wariness (care); conscientiousness (adj.) careful; wary; methodical; vigilant; conscientious; thorough</td>
</tr>
<tr>
<td>no-curo</td>
<td>indifference; indifferent; careless; unconcerned</td>
</tr>
<tr>
<td>pre-curo</td>
<td>= precaution</td>
</tr>
<tr>
<td>auto-curo</td>
<td>= self-interested</td>
</tr>
<tr>
<td>curvo</td>
<td>(noun) curvature (adj.) curved</td>
</tr>
<tr>
<td>in-curvo</td>
<td>= concave; concavity extra-curvo = convex(ity)</td>
</tr>
<tr>
<td>u curvo lineo</td>
<td>= curve; arch</td>
</tr>
<tr>
<td>cyano</td>
<td>(noun and adj.) blue (ness)</td>
</tr>
<tr>
<td>decoro or</td>
<td>(noun) beauty; elegance; loveliness</td>
</tr>
<tr>
<td>callo</td>
<td>(adj.) beautiful; lovely; elegant</td>
</tr>
<tr>
<td>no-decoro</td>
<td>= ugly, ugliness</td>
</tr>
<tr>
<td>defecto</td>
<td>(noun) defect, blemish, shortcoming (adj.) defective; blemished; spoilt</td>
</tr>
<tr>
<td>no-defecto</td>
<td>. all right; perfection</td>
</tr>
<tr>
<td>(u) cerebra defecto (pe)</td>
<td>= mental defective); imbecile; idiot; idiocy (492)</td>
</tr>
</tbody>
</table>
(198) demo (noun) population; folk
    minus demo = uninhabited
    mega demo = populous

(199) demonstro (noun) proof; demonstration
    minus demonstro = unproven

(200) desicco (noun) dryness; drought
    (adj.) dry no-desicco = moist{ure)
    u desicco-ma = dehydrating agent
    u desicco-re = desiccator; dryer

(201) disputo (noun) argument; disputation; debate
    (adj.) disputatious; argumentative
    u lego disputo-pe = advocate; barrister

(202) dissipo (noun) wasting; waste; dissipation;
    excretion (action or result) (adj.) wasteful
    no-dissipo = thrift(y); economy; economical
    u dissipo-va = garbage-can; dust-bin; rubbish-box

(203) divino (noun) guessing; guess-work
    u divino-pe = tipster; fortune-teller
    u di vino-valuta = a bet

(204) diviso (noun) factor(adj.) factorizable
    bi-diviso = even
    no bi-diviso = odd
    n iso-diviso = nth root

(205) dramo (noun) drama; (play)(adj.) dramatic; affected
    dramo-pe = actor

(206) dromo or (noun) running; run
    curso (adj.) running; racing
    u compete dromo = a race

(207) duco or (noun) priority; leadership (state or behaviour)
    hegerno (adj.) leading; chief; main; primary; head
    (adv.) especially; particularly; above all
    no-duco = secondary

(20.8) dyno (noun) force; power; might; strength (bodily)
    (adj.) compelling; powerful; forceful; mighty; strong (bodily)
u soma dyno = brute force
causo u dyno = by force (i.e. in response to force)
per dyno = by force (i.e. by means of force)

Note.—In everyday speech we do not draw a clear distinction between force and power, as in mechanics. Since the international unit of mechanical force is the dyne, we should use dyno for force in the mechanical sense. For power in mechanics we can use: (213) ergo-tern ratio (work-time ratio).

(209) eco or (noun) residence; abiding
resido (adj.) resident
un eco-pe = resident; lodger un eco-do = boarding-house

(210) electio (noun) choice; choosing; selection; discrimination (adj.) selecting; choosing
non-electio = random
ge electio = chosen; elected; selected
pan-electio = promiscuous, promiscuity; undiscriminating
un electio-fa = deputation, delegation

(211) electro (noun) electricity
(adj.) electric; charged; electrified non-electro = uncharged; discharged

(212) elemento or (noun) simplicity (of structure or design)
haplo (adj.) simple; elementary
non-elemento = complexity
un elemento-ma = a (chemical) element

(213) equatio (noun) balance; equilibrium (state)
(adj.) balanced; equilibrated

(214) ergo (noun) work; employment; task; job; labour
(adj.) working; employed
non-ergo = idle(ness)

(un) anti-ergo = lazy(-iness); sloth(ful)
(un) ergo moro = industrious; (industry)
forto ergo = busy
(un) agri ergo = agriculture; agricultural
u cerebra ergo = brainwork; intellectual work (491)
(215) erro (noun) error; mistake; falsity; (action, valuation, or expression) (adj.) erroneous; mistaken; false non-erro = precision; accuracy; exactitude

(216) erythro (noun and adj.) red(ness)

(217) espio (noun) spying; espionage (adj.) spying un espio polizi = police spy, detective (843)

(218) eu (noun) goodness; virtue; righteousness (adj.) good; right; virtuous; righteous (adv.) well (see also (222))

(219) examino or (noun) test; experiment; examination experimento (adj.) experimental u lego examino = a (legal) trial, arraignment un examino-pe inspector

(220) excesso (noun) excess; superfluity (adj.) excessive (adv.) too

(221) expecto (noun) expectation; anticipation (adj.) expectant (pers.); expected (imp.) minus expecto = surprising; sudden(ness); abruptness; (adv.) by surprise; abruptly post expecto = overdue

(222) experto or (noun) skill; cleverness techno (adj.) clever; skilful; expert (adv.) well (of performance)

(223) fabrico (noun) structure; composition (adj.) composite; compound u fabrico-ma = a (chemical) compound

(224) facilo (noun) ease; facility (adj.) easy no-facilo = difficulty

(225) famo (noun) reputation; fame no-famo = insignificance; insignificant (of people) en-famo = glory; grandeur; glorious; splendid mega famo = famous; well-known; celebrated

(226) fatigo (noun) weariness; fatigue (adj.) tired; weary; fatigued no-fatigo = freshness
(227) **fero (noun)** the wild state; wildness
    (adj.) wild; feral; not domesticated
    **no-fero** = tame(ness); domestication; domesticated

(228) **fertilo (noun)** fertilization (of egg); conception
    (adj.) fertilized; pregnant
    **minus poto de fertilo** = infertile (of female); sterile (of thing or process)

(229) **lino (noun)** end (of thing or process);
    extremity; termination
    (adj.) final; terminal
    (adv.) /ultimately ; at last

(230) **fisco (noun)** taxation
    (adj.) taxing; fiscal
    **minus fisco** = tax-free
    **extra-fisco** = customs; tariff
    **in-fisco** = excise **pe- fisco** = income-tax
    **u fisco-pe** = tax-collector

(231) **fissuro (noun)** crack(ing); fissure
    (adj.) cracking
    **ge fissuro** = cracked

(232) **fixo or (noun)** firmness (physical); tightness;
    **stabilo** (stability)
    (adj.) firm; fast; tight; (stable)
    **no-fixo** = loose(ness); unstable; instability

(232) **flagello** (noun) whipping; scourging; thrashing; beating
    **u flageilc-re** = whip, scourge

(234) **fiavoro (noun)** flavour; taste
    (adj.) flavoured
    **no-flavoro** = tasteless(ness); insipid(ity)
    **u flavoro-ma** = spice; condiment

(235) **forto** (noun) intensity; *depth (of colours) ;
    strength (of reaction)
    (adj.) intense; dark or deep (of colour); strong (of reaction)
    (adv.) very
    **no-forto** = weak (of reaction)
no-forto (de chromo) = pale, pallor (174)
no-forto (de photo) = dim(ness) (359)
no-forto (de phono) = faint(ness) (of sound) (357)

(236) fortuno (noun) chance; probability (in mathematical sense)
   forto fortuno = probable

(237) fracto (noun) breaking; break; fracture; '-interruption
      (adj.) breaking; interrupting
      ge fracto = broken; interrupted; discontinuous
      no ge fracto = unbroken; uninterrupted; continuous

(238) frequo (noun) frequency (in time or space)
      (adj.) frequent; common (adv.) often
      no-frequo = seldom; uncommon; infrequent

(239) frictio (noun) rubbing; friction
      (adj.) frictional

(240) frigo (noun and adj.) cold (physical)

(241) frustrro (noun) disappointment
      (adj.) disappointed (pers.); disappointing (things)

(242) fugo (noun) flight (running away)
      (adj.) fleeing
      u fugo-pe = fugitive

(243) fumo (noun) smoke(adj.) smoky; smoking

(244) gameo (noun) marriage (adj.) marrying
      (u) no-gameo = illegitimate; illegitimacy
      u gameo-pe = a spouse
      no ge gameo = unmarried

(245) geneto (noun) inheritance; heredity
      (adj.) hereditary
      u bio geneto = biological inheritance
      u lego geneto = legal inheritance
      u geneto-pe = inheritor

(246) glauco or polio (noun and adj.) grey (ness)

(247) gluco (noun) agreeableness; pleasantness; (comfort)
      (adj.) agreeable; pleasant; nice; comfortable (imp.)
no-gluco = unpleasant; disagreeable; uncomfortable (imp.)
plu gluco-re = comforts

Note.—The meaning of comfortable is not the same in the sentences:
(a) this chair is comfortable (imp.), (b) are you comfortable? (pers.).
The correct equivalent of the second is: que tu habe hedo (131). The abstract noun comfort may mean either consolation, for which we have consoło (184), or congeniality, pleasantness, etc., as above.

(248) gono (noun) angle; corner; angularity
   (adj.) angular; (bent)
   u brachi gono = elbow (485)
   u poda gono = knee (536)
   u gono-lo = cape
   in ge gono = dovetailed
For all plane figures, proceed as follows:
   (u) tri-gono = triangle; triangular
   (u) tetra-gono = quadrilateral;
   (u) penta-gono = pentagon(al)

(249) grado (noun and adj.) walk(ing)
(250) grapho (noun and adj.) writing (act of, or written matter)

(251) gratio (noun) thanks; gratitude
   (adj.) grateful; thankful; appreciative
   no-gratio = thankless; ungrateful

(252) gravito (noun) falling; fall; sinking; descent(under gravity)
   (adj.) falling; sinking
   no-gravito = floating
   un hydro gravito = waterfall, cascade (263)

(253) gravo (noun) importance
   (adj.) important; (significant); weighty (adv.) especially
   no-gravo = unimportant; insignificant; triviality)

(254) ftrcfio’of (noun) party; social group; society;
   partio (organization) (adj.) social
   no-grego = unsocial
   (u) grego-volo = sociability; sociable
   un anti-grego = an opposition party
(255) **gyro** (noun) *rotation; revolution* (geometr.)(adj.) *revolving; rotating*

  hemi gyro = half-turn; inversion; inverted; upside down
  un gyro-re = top
  un gyro-me = centrifuge; (cream) separator

(256) **hagio** or (noun) sacredness

  sacro (adj.) sacred; sacrosanct; (holy)
  un hagio-pe = a saint

(257) **helico** or (noun) *coiling (action or result); spiral; whorl*

  un helico rheo = vortex (397)
  un helico acu = screw (733)
  u tricha helico = curl (545)

(258) **helo** or (noun) *slavery; servitude; slave; serf; servile*

(259) **hetero** (noun) *difference; distinction (adj.) different; unlike1; (other—see p.141) (adv.) otherwise*

(260) **historo** (noun) *narration; record; (account);(history) (adj.) narrative*

(261) **horizo** (noun) *flatness (i.e. horizontality) (adj.) horizontal ; level (with ground)’;(flat) Note.—Flat(ness) may refer to a plane surface (see 364). un horizo lineo = the horizon (287)*

(262) **humano** (noun) *courtesy; politeness; concern for others (adj.) polite; courteous; urbane; considerate*

(263) **hydro** (noun) *water (adj.) water(y); wet ge hydro = sodden; soaked; irrigated; inundated*

(264) **immuno** (noun) *protection; defence; immunity; safety (adj.) safe; immune ge immuno = defended; protected , un immuno-pe = guardian; champion; defender un immuno-re = guard (thing)  

1 We can use hetero as we use unlike in adverbial constructions such as: hetero fe, mi no pre vise an = unlike her, I did not see Him,
(265) **impacto** (noun) impact; blow; knock; push  
(adj.) striking  

(266) **impero** (noun) command; decree; (order)  
(adj.) imperative; commanding  
**un impero-pe** = commander  

(267) **inflatio** (noun) inflation; swelling; distension;  
turgidity (state) (adj.) swollen;  
distended; inflated; turgid  
**non-inflatio** = limpness  
**un inflatio-lo** = boil; swelling; (bump)  

(268) **inhibito** (noun) hindrance; interference; inhibition; (disturbance)  
(adj.) interfering; inhibiting; thwarting; (disturbing)  
**holo inhibito** = prevention; preventive; (stopping)  
**un impero de inhibito** = prohibition (against)  
**auto-inhibito** = reserve(d); prim(ness); shy(ness); bashful(ness);  
demure(ness)  

(269) **insuro** (noun or adj.) insurance  
**non-insuro** = uninsured  

(270) **investo** (noun or adj.) investment  
**un investo pecunio** = dividend (348)  

(271) **iodeo** (noun or adj.) violet; (purple)  
**no-forto iodeo** = mauve; lilac  

(272) **itero** (noun) repetition; reiteration  
(adj.) repeated  
(adv.) again  
**poly itero** = repeatedly; repetitive  

(273) **itinero** (noun) travelling); journey(ing)(adj.) travel (ling)  

(274) **judico** or **arbitro** (noun) decision; judgment; ruling  
(adj.) deciding; judging  
**judico anti** = condemnation (legal)  
**un judico pro** = acquittal  
**un judico-fa** = jury
(275) **juro**  
(noun) fair-play; justice; honesty  
(adj.) fair; just; honest  

**non-juro** = injustice; unjust; unfair(ness); dishonest(y)

(276) **lapso**  
(noun or adj.) slipping; sliding; gliding; skating  

**lapso vagoni** = sledge (781)  
**u lapso pedi-ve** = skate (59)

(277) **laudo**  
(noun) praise; approval; esteem; regard (sentiment- or its expression)  
(adj.) approving; admiring  

**no-laudo** = disapproval; disparagement, disfavour  
**mega laudo** = admiration; eulogy  
**u pseudo laudo** = flattery; flattering  
**u grapho de laudo** (pro) = testimonial (for)

(278) **lavo**  
(noun and adj.) washing; bathing  
**u lavo-pe** = a launderer

(279) **lecto**  
(noun and adj.) reading

(280) **lego**  
(noun) law; regulation; (rule)(adj.) legal; regulatory  
**no-lego** = illegality)  
**un anti-lego** = crime; criminal (adj.)  
**u lego promisso** = legal contract (lease)  
**u lego-do** = court,

(281) **leuco**  
(noun and adj.) white(ness)

(282) **liberalo**  
(noun) generosity; liberality (of goods or sentiment); tolerance (adj.)  
**generous; liberal; tolerant**  

**(u) no-liberalo** = miserliness; greed(y)  
**(u) no-liberalo de credo** = intolerance; intolerant

(283) **libero**  
(noun) freedom; independence  
(adj.) free; independent  
**no-libero** = dependence  
**u libero tem** = leisure  
**u libero di** = a holiday

(284) **libido**  
(noun) appetite; lust; avidity  
(adj.) lustful; (hungry); (thirsty); avid
u libido-pe = addict; libertine; rake
u loco-libido = nostalgia; homesick(ness)

Note.—Qualify any of the above with phago (353), bibo (160) or sex where necessary.

(285) ligato (noun) ligation; tying
   (adj.) tying u ligato-cruci = knot (710)

(286) limito
   (noun) limitation; restriction (act of)
   (adj.) qualifying; limiting (adv.) somewhat
ge limito = limited; qualified; restricted

(287) lineo
   (noun) line; stripe
   (adj.) linear

(288) liquo
   (noun and adj) liquidity)

(289) logo
   (noun and adj.) understanding

(290) longo
   (adj.) long
   no-longo = short
metro de longo = length; distance

Note.—Longo and no-longo refer to space. For long, short (brief) with tern, use mega and micro.

(291) luco
   (noun) translucency; (clearness)
   (adj.) translucent; transparent; clear
no-luco = opaque; murky

(292) luteo or xantho
   (noun and adj.) yellow(ness)
erythro-luteo = orange

(293) lyso
   (noun) separateness; separation
   (adj.) separate; distinct
u lyso minus hetero = a distinction without a difference

(294) magico
   (noun) magic; witchcraft
   (adj.) supernatural; magical
u magico-pe = wizard; clairvoyant; medium
u magico-fe = witch; clairvoyant; medium
u magico accido = miracle
(295) magneto (noun) magnetism
(adj.) magnetic

u magneto-re = magnet

(296) malo (noun and adj.) evil; bad[ness]; wicked[ness]
(adv.) ill

u malo-pe = criminal; malefactor; crook

Note.—Drop o in compounds before a vowel.

(297) mano or (noun) dilution (action or state) ; rarefaction
dilute (adj.) dilute; rarefied; sparse

no-mano = concentration; concentrated; dense

(298) masso (noun) mass; weight
(adj.) heavy; weighty; massive

no-masso = lightness)

u masso-re = burden; load; ballast

u comparo masso = density

Note.—For weight as used in mechanics, in contradistinction to weight (mass) of everyday speech, we can use either baro (157) or gravito-masso (253).

(299) maturo (noun) maturity; ripeness
(adj.) mature; ripe; adult; full-grown

no-maturo = immaturity; immature; childish

meso-maturo = adolescent; adolescence

u maturo-pe = adult

(300) melano (noun and adj.) black [ness]

(301) merco (noun and adj.) purchase; buying

u merco-pe = customer; client

(302) metodo (noun) method; means; (way); technique

(303) milito (noun) fighting • war; battle; strife
(adj.) militant; belligerent; fighting

u fracto de milito = armistice

(u) micro milito = quarrelling

un in-milito —revolt; insurrection; mutiny

u via milito = brawl; street fight; riot (668)
(304) ministro (noun) service; devotion (behaviour)
(adj.) serving
u ministro-pe (or u ministro-fe) = servant

(305) miro or thauomo (noun) amazement; astonishment;
(wonder; (surprise)
(adj.) amazed; astonished; (surprised)
no-miro = commonplace; ordinary; mediocre; mediocrity

(306) miso (noun) hate; hatred; aversion; antipathy
(adj.) hostile; antagonistic
forto miso = loathing

(307) mixo (noun) mixture; blending (action or result)
(adj.) mixing; blending
ge mixo = blended; mixed; adulterated
no ge mixo — unblended; unmixed; unadulterated

(308) mnemo or memo (noun) memory; remembrance
no-mnemo = forgetful(ness); amnesia

(309) monito (noun) advice; counsel; warning against (anti)
(adj.) warning; advisory
u monito-pe = advisor; counsellor
u lego monito-pe = solicitor; notary

(310) mordo (noun) bite; biting (adj.) biting; chewing

(311) morpho (noun) shape; form
no-morpho = amorphous; shapeless
u morpho-re = figure; shape (concrete)
u-morpho = shapely; (elegant)
malo-morpho = misshapen; deformed

(312) morto (noun) death; decease
(adj.) dead; defunct; deceased
(u) proto morto = dying
u morto-lo = cemetery (53)

u morto-ca = vault (47)

u morto soma = corpse (541)

u morto cavito = grave (167)

u morto theca = coffin (698)

u morto celebro = funeral

u morto-te = pall (57) (169)

u morto-va = urn (58)

u morto-doo = mortuary

u morto- vagoni = hearse (781) (48)

u morto grapho = obituary (250)

(313) musico
(noun) music; tune; melody,
(adj.) musical; tuneful; melodious

no-musico = discord

jun avi-musico = birdsong (557)

(314) muto or
(noun) change; variation; alteration
(vario (adj.) changing; varying

no-muto = constancy; fidelity; constant; faithful; conservative

u muto-pe = turncoat; traitor

(315) mytho or
(noun) myth; fantasy; make-believe;
fantaso fiction; (imagination),
(adj.) mythical; fictitious

no-mytho = real; concrete; matter-of-fact

u mytho-pe = spook; spectre, ghost

(316) narco
(noun) narcosis; intoxication
(adj.) intoxicated; drunk; narcotized; drugged

no-narco = sober

u narco-ma = drug, narcotic (54)

u narco-pe = drunkard

u narco vendo-pe = druggist (451)

u narco catalyso-pe = dispenser (166)

u narco experto-pe = pharmacologist (222)

(317) natio
(noun) nationality; nation (adj.) national

u natio-pe = a national

(318) nato
(noun) birth (adj.) born

u nato-pe = a native

u nato-lo = birthplace
(319) necro  
(noun) destruction (action)(adj.) destroying
ge necro = destroyed

(320) negotio  
(noun) transaction; affair; (business)
unatio negotio-pe = ambassador

(321) neo  
(noun) newness; freshness; novelty
(adj.) new; fresh; novel
no-neo = unoriginal; derivative
un neo-pe = newcomer
plu neo data = news

(322) nocuo  
(noun) harm; damage; hurt (action or result)
(adj.) harmful; damaging
no-nocuo = harmless; innocuous
ge nocuo = hurt; damaged; spoilt
un ge nocuo persona = victim

(323) nomino  
(noun) name; appellation(adj.) nominal
no-nomino = anonymity; anonymous; nameless

(324) nomo  
(noun) principle; theory; rule); law(scientific)
(adj.) theoretical

(325) normo  
(noun) standard; norm; typical; representative
(adj.) normal; standard; orthodox
no-normo = unorthodox
un normo-metro = unit (of measurement)

(326) nullo or quito  
(noun) cancellation; (receipt); annulment
(adj.) annulling
un nullo de nota = receipt (839)
un nullo de gameo = divorce (244)
un nullo de confessio = recantation
un nullo de helo = emancipation
un nullo de judico anti = reprieve
un nullo de mero premio = discount (371)
un nullo de mero fisco = tax rebate

(327) numero  
(noun) number; cardinal numeral
(adj.) numerical
un ordino numero = an ordinal number
(328) **occasio** (noun) *opportunity; (chance); (vacancy)*

*minus occasio de ergo = unemployed*

*un non-occasio de ergo = unemployment*

*un occasio de pronto = prospects (374)*

(329) **odoro** *or* (noun) *odour; aroma; smell*

**aromo** (adj.) *odorous; aromatic*

*non-odor o = odourless*

*eu-odoro = scent(ed)*

*mal-odoro = stinking; stench*

(330) **offeror** (noun) *(reservation)*

(adj.) *offering*

*non-offeror = withholding*

(331) **oneror** or (noun) *responsibility; (liability*

**liabilo** (adj.) *responsible*

*un onero-pe = sponsor; guardian; guarantor*

*un onero pecunio = bail*

(332) **opprespor** or (noun) *oppression; persecution,*

**persecuto** (adj.) *oppressive*

(333) **ordino** (noun) *(rank; position (in scale)); (order); degree; grade (adj.) ordinal*

(334) **orientatio** or (noun) *attitude; orientation ‘(social); mood*

*un normo orientatio = temperament; character*

(335) **orno** *(noun) ornamentation; ’adornment; embellishment; decoration “ (adj.) ornamental; decorative*

*non-orno = unadorned; (sober); plain*

*plu orno-re = jewellery*

(336) **ortho** (noun) *(uprightness)*

(adj.) *vertical; (upright)*

*un ortho gono = right angle*

(337) **osculo** (noun and adj.) *kiss(ing)*

(338) **oxidatio** (noun) *oxidation; rusting (adj.) rusty*

*un oxidatio-ma = rust*
(339) **pachyo**

(noun) thickness
(adj.) thick; stout; (fat)

no-pachyo = slender(ness); thingness); lean(ness)

(340) **paco**

(noun) peace; tranquillity (personal or * social)
(adj.) peaceful; calm; tranquil; contented

no-paco = disturbance; disturbing; strife

(341) **palaeo**

(noun) antiquity
(adj.) old; aged

major palaeo = elder (adj.)

u paleo-pe = an elder; veteran

(342) **papillo or projectio**

(noun) protuberance; projection
(adj.) projecting; sticking out

(343) **parallelo**

(noun and adj.) parallelism

(344) **paralyso**

(noun) paralysis; numbness
(adj.) paralysed; numb

(345) **parasito**

(noun) parasitism (adj.) parasitic

u parasito bio-re = parasite

(346) **pardo**

(noun) forgiveness; mercy; pardon; clemency (sentiment of behaviour)
(adj.) forgiving; merciful; (charitable),

(u) petitio de pardo = apology; apologetic; excuse
(u) baso de pardo = extenuating circumstances; justification; excuse

(347) **patho**

(noun) disease; sickness; illness; bad health
(adj.) diseased; sick; ill

u patho-pe = invalid; patient
u cerebra patho-pe = lunatic (490)
(u) cerebra patho = insane; insanity; lunacy
u patho-taxi = ambulance (779)

(348) **pecunio**

(noun) payment; remuneration (adj.) paying

u no-pecunio = debt
u pecunio pre debito chron = payment in advance
un eco pecunio-pe = tenant; lodger
(u) divino pecunio = gambling; bet; wager
(349) **pedio**  
(noun) youth (adj.) young; childlike  

**u pedio-pe** = child  
**u pedio-an** = boy  
**u pedio-fe** = gift

(350) **penito**  
(noun) regret; repentance (sentiment or behaviour) (adj.) repentant; sorry (attributive)

(351) **peno**  
(noun) punishment; penalty; vengeance; retribution; revenge  
(adj.) penal; vindictive; avenging  

**u peno milito** = feud  
**u peno-do** = prison; penitentiary  
**u peno-ca** = dungeon; cell  
**u morto peno** = death penalty; capital punishment

(352) **phaeo**  
(noun and adj.) brown(ness)

(353) **phago or dieto**  
(noun and adj.) eating; feeding; meal  

(u) **no-phago** = fast(ing)  
**u phago-pe** = glutton; gourmand  
**u phago tene-ca** = pantry; larder (479)  
(u) **phago-ma** = edible; food

(354) **phanero**  
(noun) (clarity)  
(adj.) manifest; (clear)  

**no-phanero** = obscure; obscurity; involved

(355) **philo**  
(noun) love; loving; (tenderness) (adj.) loving  
**ge philo** = dear

(356) **phobo**  
(noun) fear; dread; alarm; anxiety; timidity  
(adj.) fearful; dreading; anxious; afraid; timid  

**no-phobo** = fearless (ness); brave (ry); courage  
**u phobo-pe** = coward  
**u phobo pecunio** = blackmail

(357) **phono**  
(noun) sound; noise  
(adj.) noisy; sounding  

**no-phono** = quiet(ness); soundless (ness); still(ness)  
**eu-phono** = harmony  
**malo-phono** = discord; cacophony
(358) **phoro**  
(noun) *transport; carriage; conduction*,  
(adj.) *conducting; (carrying)*  
plu phoro re = *baggage; luggage*

(359) **photo**  
(noun) *light; shine*  
(adj.) *shining; (light)*  
no-photo = *dark (ness)*  
meso photo = *dim(ness); twilight*  
u plasti photo-re = *wax candle (802)*

(360) **phreno**  
(noun) *reasoning; logic*  
(adj.) *reasonable; logical*  
(u) phreno poto = *intelligence; intelligent (137)*

(361) **physio**  
(noun) *(state); (condition); (nature).*  
crystali physio = *crystalline state (793)*  
gasi physio = *gaseous state (796)*  
liquo physio = *liquid state (288)*  
stereo physio = *solid state (428)*

(362) **picto**  
(noun) *picture; image;*  
(adj.) *pictorial*  
li picto-pe = *artist; (painter)*  
u soporo picto = *dream (423)*  
u stereo picto = *idol; image; sculpture (428)*  
u verba picto = *metaphor (860)*

(363) **piano**  
(noun) *plan(ning); project; design*  
(action or result) (adj.) *planning*  
u crypto piano = *plot; conspiracy*

(364) **plato**  
(noun) *flatness*  
(adj.) *plane; (flat)*  
u plato mero = *palm; sole*  
u plato morpho-re = *plane figure*  
u plato-secto = *a plane (geom.)*

(365) **pleno**  
(noun) *fullness*  
(adj.) *full; filled with (per)*  
u pleno-re = *bung; stopper; plug*

(366) **plico**  
(noun) *fold (ing)*  
(adj.) *folding*  
ge plico = *folded*  
poly plico = *grooved; corrugated*
un in-plico = groove
un helico pico roll

(367) pluto  (noun) prosperity; riches; (luxury)
            (adj.) prosperous; rich
no-pluto = poor; poverty
u pluto-re = a luxury

(368) pluvio  (noun and adj) rain(y); raining
            u glacia pluvio = hail (876)

(369) pneumo or
       respiro  (noun) breath(ing); respiration
            (adj.) breathing; respiring
no-pneumo = breathless {ness)
(un) in-pneumo = inhalation; inhaling; (inspiration)
(un) extra-pneumo = exhalation; (expiration)

(370) praxo  (noun) practice; experience
            (adj.) practical; empirical
no-praxo = unpractical;  academic (excesso nomo = (324))

(371) premio  (noun) cost; price; expense
            mega premio = costly; expensive; (dear)
            micro premio = cheap (ness)

(372) privilegio  (noun) privilege; right
            (adj.) privileged; rightful
no-privilegio = outcast; disfranchised
plu privilegio de plu homini = the rights of man
u privilegio manifesto = declaration of rights

(373) producto  (noun or adj.) product (math.)
        e.g. u bi- producto = the square of

(374) profito  (noun) profit; reward; advantage ; success
            (adj.) profitable; advantageous
ge pronto = successful
no-profito = unprofitable
u malo-profito = disadvantage; drawback; objection

(375) promisso  (noun) promise; (undertaking)
            (adj.) promissory u
promisso-pe = guarantor
u recipro promisso = (com) pact; treaty; alliance; contract; agreement

(376) proposo
(noun) proposal; (suggestion); (motion);
(proposition) (adj.) proposing
u proposo-pe = proposer
u post proposo-pe = seconder

(377) prospecto
(noun) (view); (prospect); (outlook)
(adj.) scenic
u rura prospecto = scenery
extra prospecto = invisible
eu-prospecto = conspicuous
micro-prospecto = inconspicuous

(378) protesto
(noun) protestation; (complaint);
(lament(ation)); (objection)
(adj.) protesting; complaining; lamenting
u protesto-pe = complainant
u milito protesto-pe = conscientious objector

(379) pseudo
(noun) deceit(fulness); lying; lie;
mendacity; falsity
(adj.) deceitful; treacherous; lying; false
u pseudo-pe = liar; deceiver

(380) publico
(noun) publicity; advertisement; (notice)
(adj.) public; advertised
no-publico = privacy; private

(381) pudo
(noun) horror; disgust
(adj.) horrible; disgusting; obscene; revolting

(382) puro
(noun) cleanliness; purity
(adj.) pure; clean
no-puro = dirty; impurity; impure

(383) pylo or perforato
(noun) piercing; perforation; puncture;
(prick) (act or result); hole (in wall or fabric)
(adj.) perforating; (stinging); (drilling)
ge pylo = punctured; pricked; perforated; pierced
u pylo-ru = gimlet; auger; (drill); awl; sting (of insect or nettle)

(384) pyro
(noun) combustion; burning; fire; flame; (state)
(adj.) burning; flaming; ablaze
u pyro centra = spark (706)
un pyro nocuo = a burn (322)
un urani pyro = lightning (665)

(385) qualito
(noun) quality; characteristic; attribute
(adj.) qualitative
auto-qualito = specific; innate; natural

(386) radio
(noun) ray; spoke; radius
(adj.) radiant (phys.)
un recto radio = beam; (shaft) (390)
un heli radio = sunray; sunbeam (646)
un luna radio = moonray; moonbeam (649)

(387) rapo
(noun) grasping; seizure; (catching)
(adj.) seizing; grasping
un milito per rapo = wrestling

(388) raso or talo (noun and adj.) scratching; scraping
un raso-ru = rake; scraper

(389) ratio
(noun) ratio; rate; fraction

(390) recto
(noun and adj.) straight(ness); rectilinear[ity]
no-recto = crooked(ness)

(391) reflecto
(noun) reflection; (brightness)
(adj.) reflecting; resplendent; (bright); (shining)
no-reflecto = dull (ness); non-reflecting

(392) religio
(noun) religion; (faith)
(adj.) religious
no-religio = irreligious; profane; secular
un religio grego = religious order; denomination (254)

(393) reparo
(noun) repair; mending; remedy; cure
(action or result)
(adj.) mending; remedial; curative
un pedi-ve reparo-pe = cobbler (533)
un via reparo-pe = roadmender, navvy (668)

(394) residuo
(noun) “residuality”
(adj.) residual; remaining; (other); (left)
(adv.) else; (besides); (over)
Note.=Residuo means other when other means remaining; hence always after or: allo u residuo... =or the other... or another... The derivative pronouns illustrate the use of the adjectival equivalents:

singulo residuo re := everything else
singulo residuo pe = everybody else; everyone else
zero residuo re = nothing else; nothing more; nothing left
zero residuo pe = nobody else; no-one left
u residuo re = residue; remainder; anything over; anything left
u bio residuo-re = a fossil

(395) resisto (noun) strength (of materials or will); opposition (to change); resistance (to tension or current) (adj.) strong (as above); resistant
no- resisto = weak(ness); non-resistant (as above); (flimsiness); flimsy; (delicate)
resisto de thermo = heat stable
resisto de baro = incompressible
resisto de fracto = unbreakable
resisto de tenslo = unstretchable
resisto de pylo = impenetrable (-ility)
resisto de rheo = viscosity; viscous
resisto de electro = insulating; dielectric
no-resisto de electro = conducting

(396) revero or (noun) reverence; respect; worship
latrio (sentiment or action) (adj.) reverent; respecting; worshipping
no-revero = disrespectful); (flippant)'; (profane)

(397) rheo (noun) current; flow; tide (adj.) flowing; streaming; tidal
un aero rheo-ru = bellows; fan

(398) rhodo (noun or adj.) pink (ness)

(399) rigo (noun) rigidity; stiffness(adj.) rigid; stiff
no-rigo = flaccid(ity); flabby; flexible; flexibility

(400) riso (noun) laughter (adj.) laughing ; smiling
u riso minus voco = a smile
(u) riso anti  mockery; mocking; derision

(401) rugo  (noun) roughness; coarseness (of texture)
(adj.) rough; coarse (as above)
no-rugo = smooth(ness); (even)

(402) sado  (noun) cruelty; ferocity; malice
(sentiment or action)
(adj.) cruel; fierce; tormenting; malicious
u sado-pe = tormentor; sadist

(403) saito  (noun or adj.) jump(ing); leaping

(404) salnto  (noun) greeting; welcome
(interjection) how do you do, good-day, etc.

(405) sano  (noun) health
(adj.) healthy; (well); hygienic (imp.)

u sano experto-pe = physician; doctor (222)

(406) sapio  (noun) knowledge; (information); acquaintance

(407) sapro  (noun) decay; putrefaction
(adj.) decayed; rotten; foul

(408) schizo  (noun) splitting; cleavage; cleft; cleaving; tear(ing); division
(adj.) splitting; tearing
ge schizo = split; torn; (divided)

(409) scholo  (noun) instruction; study; learning; tuition
(adj.) educative; instructive
u duco scholo-fe = head mistress

(410) sclero  (noun) hardness (of materials)
(adj.) hard (as above)

no-sclero = (softness) (as above)

(411) scopo  (noun) search; watching; observation; inspection
(adj.) searching; inspecting; observing

no-scopo = unobservant
u scopo-pe = observer; scout; patrol

(412) secto  (noun) cut (ting); dissection; pruning
(adj.) cutting
ge secto = cut; pruned
no ge secto  = uncut
u sano secto-pe = surgeon

(413) semao  
(noun) signal; sign; symbol;
(gesture)(action or result)
(adj.) symbolic

u cephalı semao = nod (491)
u dactyli semao = beckoning (500)
u numero semao = figure, cipher (327)
un oculı semao = wink (526)
u phono semao = letter (of alphabet) (357)
u soporo semao = yawn (423)
u typo semao  = punctuation mark (444)

(414) sensitive or  
(noun) sensitivity; receptivity
recepto (adj.) sensitive; receptive
no-sensitivo = indelicate; insensitive; thick-skinned
sensitive de baro = compressible (-ility)
sensitive de tensio  = extensible l-ility)
sensitivo de thermo  = heat labile
no-sensitivo de photo = blind (ness)
no-sensitivo de phono = deaf(ness)

(415) serio  
(noun) series; list; succession; array; sequence
(adj.) serial; successive; consecutive
u bibli serio  = catalogue (of books) (814)
u chron serio  = timetable (62)
un in-re serio = table of contents, index
u nomino serio = roll (of school, etc.) (323)
un ortho serio = column (336)
u parallelo serio = table (in books) (343)
u re serio = inventory
u trans serio  = row (101)

(416) severo  
(noun) strictness; severity
(adj.) strict; severe; (hard)
no-severo = indulgence; lenient

(417) significo  
(noun) significance; meaning
(adj.) meaningful; (significant)

(418) siphono  
(noun) suction; siphoning
(adj.) shucking; (pumping)
(419) **societo**  
(noun) organizing; organization  
(adj.) organizing  

`societo` = organized

(420) **solemno**  
(noun) solemnity  
(adj.) solemn; (serious)  

no-solemno = light-headed; frivolous; frivolity; (flippant)

(421) **solutio**  
(noun) solution (state)  
(adj.) dissolved  

`solutio poto` = soluble; solubility

(422) **sopho**  
(noun) wisdom (adj.) wise; (clever)  

no-sopho = foolish; folly

(423) **soporo or somne**  
(noun) sleep; slumber  
(adj.) sleeping

(424) **specio**  
(noun) specimen; type; example; (illustration)  
(adj.) representative; illustrative  
(adv.) for example; such as

u neo specio = a copy  
u pseudo specio = a fake

(425) **sporto**  
(noun) play; game; sport; romp  
(adj.) playing  

u sporto-re = toy; plaything  
u sporto-pe = sportsman

(426) **stalagmo**  
(noun or adj.) drop(ping);  
dripping(action or result)  
(adv.) drop by drop

(427) **stato**  
(noun) rest; (calm) (adj.) resting; static; (calm);  
(steary)(of position) (adv.) at rest (phys.)  

no-stato = unrest; disturbed; disturbance

(428) **stereo or solido**  
(noun) solid (as opposed to liquid or gas)  
(adj.) solid; three-dimensional

(429) **stigmo**  
(noun) mark; spot; stain  
(adj.) marked; spotted; stained  

no-stigmo = spotless(ness)  
u stigmo de tendo = bull’s eye (of target)
(430) strategio  (noun) trick; stunt; stratagem; dodge  
(adj.) wily; cunning  
no-strategio = guileless (ness)  
u strategio-pe = trickster; conjurer  
un aero strategio-pe = acrobat (146)  
u miro strategio = conjuring trick (305)  

(431) summatio  (noun or adj.) total; aggregate  
u summatio Y plus Z = the sum of Y and Z  
u summatio Y minus Z = the difference between Y and Z  

(432) sympto  (noun) clue; symptom; hint; (suggestion)  
(adj.) symptomatic; suggestive  
no-sympto = puzzling; baffling; perplexing; bewildering  
minus pre sympto = sudden(ness); abruptness  

(433) systemo  (noun) arrangement; system; pattern; (order)  
(adj.) tidy; orderly; systematic  
u no-systemo = chaos; confusion; disorder; untidiness  

(434) tensio  (noun) stretching; extension; (tightening)  
(adj.) stretching  
ge tensio = stretched; extended; (tight)  
no-tensio = slack (ness)  

(435) testimono  (noun) testimony; evidence (legal); (witness)  
(adj.) testifying  
ge testimono = witnessed; accredited (legally)  
u testimono-pe = a witness  

(436) theo  (noun) god; deity (adj.) divine  
ge theo = deified  

(437) thermo  (noun) heat; (adj.) hot  

(438) tolero  (noun) forbearance; patience (behaviour)  
(adj.) forbearing; patient  

(439) tono  (noun) tone; note (musical); pitch  
eu-tono = in tune  
malo-tono = out of tune  
u tono-fa = bar (of music)  
u tono-re = tuning-fork
(440) **toxo or sepso**  (noun) *poison*  
(adj.) *poisonous; toxic*

ge toxo = *poisoned*

(441) **traumo**  (noun) *shock*  
(adj.) *shocked (pers.); shocking (imp.)*

(442) **tropo**  (noun) *turn (ing); twist (ing) (process or action)*  
(adj.) *turning; twisting*

u tropo axi = *pivot (736),*

(443) **turbo**  (noun) *shake; shaking; (disturbance); (agitation)*  
(action or state) (adj.) *shaking*

no-turbo = *calm(ness) (of sea)*

ge turbo = *shaken; (agitated)*

mega turbo = *upheaval*

u geo turbo = *earthquake (645)*

(444) **typo**  (noun or adj.) *printing*

(445) **umbro**  (noun) *shadow; shade; (eclipse)* (adj.) *shady*

u luna umbro = *solar eclipse (649)*

u geo umbro = *lunar eclipse (645)*

(446) **uniformo**  (noun) *regularity; uniformity*  
(adj.) *regular; uniform; (steady)* (of motion)*

on-uniformo = *irregularity; erratic*

(447) **unio**  (noun) *meeting; gathering; conference; congress; reunion; assembly (action and result)*  
(adj.) *meeting; gathering*

ge unio = *gathered; assembled*

non-unio = *adjournment; adjourned*

(448) **vacuo**  (noun) *emptiness; vacuum*  
(adj.) *empty; vacant*

(449) **valo**  (noun) *worth; value* (adj.) *valuable; worthy*

no-valo = *worthless*

u valo-re = *treasure*

(450) **vaporro**  (noun or adj.) *vapour; steam*

(451) **vendo**  (noun) *selling; sale; commerce; trade*

ge vendo = *sold*
u vendo-pe = salesman; tradesman; shopkeeper
plu vendo-re = goods; wares

(452) verito (noun)(adj.) true; correct (adv.) yesi
(453) vibro or oscillo (noun) wave; vibration; undulation; alternation
(adj.) vibrating; undulating; alternating
(adv.) to and fro; alternately; up and down

un haema vibro = pulse (512)

(454) victo (noun) victory; (conquest); win
(adj.) victorious
no-victo = defeated
u victo-pe = victor; winner; conqueror
u victo-re = a trophy

(455) violo or aggresso (noun) violence; aggression; attack
(adj.) violent; aggressive; attacking

u violo-pe = an aggressor; ruffian
plu violo verba = a threat; threats (860)

(456) viro (noun) danger; peril
(adj.) dangerous; perilous
no-viro = safe(ty)
ge viro = endangered

(457) visile (noun or adj.) visit(ing)
no-visito = absenteeism)

no no-visito persona = an absentee
u visito-pe = a visitor; guest

(458) vivo (noun) consciousness; awareness; awakeness
(adj.) awake; aware; conscious
no-vivo = unconscious
meso-vivo = half-awake; dazed

(459) voco (noun) voice; (crying aloud); call
(adj.) (calling); vocal
micro voco = whisper (ing)
alto an voco = tenor
alto fe voco = soprano

batho an voco = bass (159)
batho fe voco = contralto
meso an voco = baritone

(460) volumo or capacito

pan volumo = space (all-embracing)

Note. = Space as opposed to time (chron) is position (topo). We can use volumo and alto (150) metaphorically as in current physical metaphor for the two components of energy: quantity and potential (level). Thus:

electro alto = voltage; electric potential
electro volumo = electric charge

thermo alto = temperature
thermo volumo = amount of heat

(461) vulno

(noun) wound; sore (adj.) wounded; sore

(462) zygo

(noun) joining; union; fusion; connexion (action or result) (adj.) joining; connecting

ge zygo = united; joined together; fused

Supplementary Amplifiers

Thirteen supplementary amplifiers take their place as numbered items of the essential word-list less because they are necessary from a semantic point of view than because they dispense with the need for clumsy expressions;

(861) cambio

exchange of Y for Z (de Y vice Z); exchanging; interchange

posso de cambio = interchangeable (-ility)

(862) charito

compassionate); pity; sympathy (-etic)

minus charito = pitiless; ruthless

(863) cido

slaughter; killing; murder; fatal; mortal
cido-pe = killer; slayer; murderer
cido-lo = scaffold; (sacrificial) altar

(864) concessio

lease; concession

concessio-pe = lessor; landlord

(865) diffusio

diffusion; spreading; pervading

no-resisto de diffusio = permeable (-ility)
(866) flexio  bending; refraction; flexion
     ge flexio = bent
(867) foramino  open(ness)
(868) idio  specific (ity); special; particular
(869) massago  stroking
(870) necto  swimming
(871) perplexo or confusio  bewilderment (-ed); perplexity (-ed)
(872) universo  generality); universality)
(873) utilo  utilization; (employment); (tenure)
     excesso de utilo = wear and tear
     excesso ge utilo = worn out; shabby

APPENDIX TO CHAPTER VII

Each operative verboid of Interglossa has a clear-cut semantic domain. To prepare the way for the ensuing treatment of the operative system it will therefore be helpful to make a rough and ready classification of amplifiers listed in this and preceding chapters under the following headings: (a) physical states and qualities; (b) logical (including spatio-temporal) relationships; (c) action and reaction (including motions); (d) explicit modes of human behaviour (including social relations); (e) types of communication (“messages”); (f) personal states (affective and cognitive); (g) valuations (based on personal judgments); (h) collectives. Amplifiers which might fit into more than one class have an asterisk.

(a) Physical States and Qualities
    . (138), (141)-(145) inclusive, (150), (157), (159), (161), (162),
     (167), (169), (171), (174), (175), (177), (190), (194), (195),
     (200), (208), (209), (211), (212)*, (213), (216), (223), (227),
     (228), (232), (234), (239), (240), (246), (261)* (264), (267),
     (268)*, (271), (281), (283)* (291), (292), (293), (295)> (297)-
(300) inclusive, (307), (311), (312), (316), (318), (321), (329),
{336), (338), (339), (341), (342), (344). (345), (347), (349),
(352), (357), (359), (364), (365), (382), (384),* (395), (398), (399),
(401), (405), (409), (410), (414),* (421), (423), (427), (437), (439),
(440), (441), (448), (456), (460), (867).

(b) Logical Relationships
(44)-(46) inclusive, (53), (61)-(127) inclusive, (132), (133),
(134), (139), (149), (156), (158), (187), (204), (220),* (229),
(207), (235), (236), (238), (245), (248), (259), (261),* (272),
(286), (290), (328), (331), (333), (343), (371), (373), (388),
(390), (394), (395), (417), (431), (433), (446), (868), (872).

(c) Action and Reaction
(59), (140), (152), (160), (163)-(166), (173), (179), (189),
(191), (192), (205), (206), (210), (231), (233), (237), (242),
(249), (250), (252), (255), (257), (267), (273), (274), (276),
(278), (279), (285), (310), (313), (314), (319), (322), (337),
(353), (358), (366), (368), (369), (383), (384),* (387), (388),
(391), (393), (397), (400), (403), (412), (413), (418), (426), (434),
(442), (443), (444), (447), (451), (453), (457), (459), (462), (861),
(863)-(866), (869)-(870), (873).

(d) Explicit Human Behaviour
(151), (153), (154), (168), {176), (180),* (182),* (184),* (185),
(193),* (202), (214), (217), (219), (230), (244), (258),* (262), (268),*
(269), (270), (275), (280), (282), (294), (301), (302), (303), (304), (320),
(326), (340),* (348)> (351),* (370), (379), (392), (396),* (402), (409),
(411), (414),* (416), (419), (420),* (429), (438),* (455).

(e) “ Messages ”
(41), (42), (110), (181),* (183),* (184),* (188), (199)/(201), (251), (260),
(266), (277), (309), (324)/ (330), (346),* (350),* (360), (375), (376),
(378),* (404), (435).
(f) Personal States (Affective and Cognitive)

(125),* (128), (130), (131), (148), (155), (172), (178), (182),* (187),
(193),* (203), (221), (226), (241), (258),* (277), (284), (289), (305),
(306), (308), (315), (334), (340),* (346),* (350),* (351),* (355), (356),
(378),* (381), (396),* (406), (421),* (425), (438),* (452), (458), (862),
(871).

(g) Valuations

(129), (133), (135)-(137) inclusive, (147), (170), (180),* (196), (197),
(212),* (215), (218), (220),* (222), (224), (225), (247), (252), (253),
(258),* (277), (283),* (296), (325), (335), (354), (367), (372), (422),
(449).

(h) Collectives

(49), (146), (198),* (243), (254), (263), (287), (288), (316), (323),
(327), (361), (362), (363), (374), (377), (380), (386), (415), (424), (428),
(431), (432), (436), (445), (450), (454), (460),
CHAPTER VIII
CLASS VI—THE VERBOIDS (20)

Essential characteristics of the verboid system of *Interglossa* have come up for discussion in Chapter III. Here follows a more detailed treatment with a summary of equivalent constructions for Anglo-American verbs.

(463) **acouste** or **audie**, hear; hearing
   - **plu acouste-pe** = the audience
   - **minus poto de acouste** = deaf (137)
   - **tentato acouste** = listen (140)

The only amplifiers with which **acouste** forms operative couplets are names for sounds or sound-producing events, e.g.:
   - **acouste bronto Y** = hear the explosion of Y (163)
   - **acouste canto** = hear singing (164)
   - **acouste fissuro Y** = hear the crack of Y (231)
   - **acouste tono** = hear a note (439)

(464) **acte**, do; performance); behave; act; behaviour; deed; conduct
   - **un acte-pe** = performer
   - **plu acte nomo** = rules of conduct; “principles“ (324)

The wide operative range of **acte** depends on two types of construction:

(a) **Instrumental** use in conformity with the general formula:

   **Acte per Z de Y** = Act on Y by means of Z (= Perform with Z in relation to Y)

   In this construction Z is an instrument, e.g. a comb. Thus we have:

   **Acte per cteni de tricha** = Comb the hair (748) (545)

(b) **Non-instrumental** use with an amplifier (A) which may be any one of the numbered items in classes (c) and (d) on pp. 169-170, i.e. (i) a simple action (e.g. running); (ii) a mode of behaviour (e.g. friendliness); (iii) a physical reaction (e.g. fracture); (iv) any type of motion (e.g. rotation). With such amplifiers **acte** forms couplets with the meaning **X performs A on Y** or **X does A to Y**, **X displays the mode of behaviour A towards Y** or, if the meaning is inherently intransitive (motion or reaction), **X does A**. So we have:
X acte amico Y = \textit{X befriends Y} (151)

X acte fissure = \textit{X is cracking, X cracks} (231)

X acte gyro = \textit{X is spinning; X rotates; X is revolving} (255)

If the amplifier signifies a \textit{motion} or \textit{physical reaction}, the acte couplet is always \textit{intransitive}. The corresponding transitive couplet involves \textit{stimule} (p. 47). Otherwise the object (Y) of an \textit{acte} operative couplet is the person or thing changed (actually or potentially) as the result of the action; and if the thing or person changed is also the subject, \textbf{no} specification of an object is necessary. A substantive may follow a couplet which is intransitive in this sense without the intervention of a preposition-equivalent pointing to a relationship sufficiently suggested by the context. In accordance with current Anglo-American usage we may thus say:

**Fe pre acte grado u via holo nocti**
\textit{She walked the street all night}

**An pre acte salto u mura**
\textit{He jumped the wall}

The same remarks apply to what Jespersen calls the \textit{object of result}, or any more or less cognate object of the equivalent Anglo-American verb, e.g.:

**An pre acte dromo u competo = \textit{He ran a race}**

By the same token we can put:

**Fe acte grapho auto nomino in bibli (323) (814)**
\textit{She is writing her name in the book}

The amplifiers \textit{grapho} and \textit{lecto} commonly enter into many such constructions with the semi-cognate objects \textit{historo} (260), \textit{bibli} (814), \textit{gramma} (833), etc.; but the object in the sense defined above* is the person who receives the communication. In other words, we can regard a construction such as **\textit{acte grapho u gramma} (write a letter)** as a compound operator capable of taking its own personal object in accordance with the pattern: »

**Fe post acte grapho mi u gramma**
\textit{She will write me a letter}

By the same token the pseudonyms \textit{re} and \textit{mu} can replace such substantives as \textit{bibli or gramma}, e.g.:
Mi acte grapho re = I am writing it
An pre acte lecto mi auto neo poeti
He read me his new poem

It should scarcely be necessary to point out that the distinction between an explicit form of behaviour and a sentiment is not clear-cut or final. Consequently there are situations in which decision in favour of acte or esthe is a matter of personal judgment. Likewise, the distinction between a passive state and a type of motion depends on whether we look on a situation from an everyday or from an ultramicroscopic point of view. By motion in this context we signify visible motion, in contradistinction to the molecular motion of heat or the wave motion of a sound. Again, there is room for personal taste and judgment concerning choice between acte and habe (p, 185). In what follows the writer has checked a personal inclination to adopt forms of expression too greatly in advance of current habits of discourse.

(a) Instrumental Constructions

By itself, acte per S de Y means the same as Use S for Y; or if there is no explicit object:

\[ \text{acte per S} = \text{use S} \]

Among single Anglo-American verbs covered by this formula, we have:

\[
\begin{align*}
\text{acte per fi-ru de Y} &= \text{sew Y} (50) \\
\text{acte per mallea de Y} &= \text{hammer Y} (761) \\
\text{acte per seta de Y} &= \text{brush Y; sweep Y} (773) \\
\text{acte per spatula de Y} &= \text{dig Y} (775) \\
\text{acte per sphena de Y} &= \text{wedge Y} (776)
\end{align*}
\]

We can use the instrumental construction to cover the meaning of shoot when the instrument is a missile, e.g.:

\[ \text{acte per sagitta de Y} = \text{shoot Y} \text{ (with an arrow)} (771) \]

Similarly acte per means play when what follows is a musical instrument=a construction on all fours with Anglo-American use of perform in the same context=e.g.:

\[ \text{acte per lyra} = \text{play the harp} (759) \]
To *act by force* or to *use force* is to compel. Hence we have: **acte per dyno de** Y = *force Y to . . ., compel Y to . . .*

The corresponding passive construction is to *perform some action A on Y* (**acte A Y**) *in response to force (causo u dyno):*

**Fe pre acte unio mu causa u dyno** = *She was forced to meet them; she had to meet them (emphat.) ; she was compelled to meet them*

**(b) Simple Operative Constructions**

In accordance with the formula given above, **acte** couplets with simple amplifiers appear in the table on pp. 206-217 at the end of this chapter.

**(c) Complex Operative Constructions**

We can make three useful constructions with **acte semao per** (*signal by means of*) and **acte semao de** (*give a sign of*):

- **acte semao per cephali** = *nod* (410)
- **acte semao per dactyli** = *beckon* (499)
- **acte semao per oculi** = *wink* (525)
- **acte semao de algo** = *wince* (148)
- **acte semao de phobo** = *flinch* (356)
- **acte semao de fatigo** = *yawn* (226)

The following constructions do not occur in the table of **acte** couplets on pp. 206-217:

- **acte pro auto** = *(be) selfish* (120) (9)
- **duro acte mordo** = *chew* (64) (310)
- **tentato acte captivo** = *hunt* (181) (214)

*Note.*=The use of **acte** in an infinitive construction is reducible. Thus we say:

- **tendo u ligato de** Y *syn* Z = *in order to tie Y to Z*
- **tendo 11 grado** = *in order to walk*

(465) **balle**, *dispatch; send; throw; cast*

- **u balle-pe** = *a thrower; a sender*
- **u balle-ma** = *an emanation*

The meaning of **balle** is *motion conferred on the object by the subject and directed away from the latter.* For instance:
X post balle u gramma a mi = X is sending me a letter
X pre balle u sphera ad an = X threw him the ball
X balle Y a-supero = X is sending Yup; X is throwing, Y up
X balle Y ad hypo = X casts Y down; X knocks Y down; X tips Y over
X balle Y verso = X sends Y back; X returns Y ; X reflects Y

With amplifiers equivalent to preposition-adverbs, we have:

balle Y ad-antero = propel Y; project Y
balle Y tele auto = repel Y
balle Y apo = discard Y; evict Y; send Y away; dismiss Y; dispense with Y
balle Y (ad-extra) = eject Y
balle Y extra auto = exude Y; extrude Y
balle Y apo per dyao = push Y away
balle Y peri ~ scatter Y (seed, etc.)

With collective amplifiers, aero, fumo, hydro, vaporo,
we have:

balle aero ex unasa = blow the nose
balle fumo ad-extra = smoke (intr.)
balle hydro a-supero (or ad-extra) = spurt water, squirt water
balle vaporo apo * = evaporate (intr.)

With substantives it enters into several constructions equivalent to
single Anglo-American verbs based on:
balle Y ex auto = throw Y off; cast Y off; shed Y; get rid of Y; spit out Y

The last two words are usually redundant:
balle u feci (ex auto) = defaecate
balle plu lacrima (ex auto) = weep; shed tears
balle un ova (ex auto) = ovulate; lay an egg
balle u sudori (ex auto) = perspire; sweat
balle un urini (ex auto) = micturate; urinate

No ambiguity would arise from shortening the foregoing to baile feci,
balle ova, etc. Note also :
balle plu sperma peri = sow (seed)
balle stalagmo peri = spray; sprinkle
No ambiguity would arise from shortening these to **balle sperma,** **balle stalagmo**.

(466) **date**, *give, confer, furnish, provide, provision, gift, donation*

u date-pe = *donor*

**Date** is the *causative* operator for use with an amplifier (A) which signifies a physical condition or a logical relation, i.e. classes *(a)* and *(b)* on p. 169. We can also combine it with a collective of class *(h)*. The formula is *X confers A on Y.* Thus with **baro** (157) we have:

**X date baro** Y = **X compresses** Y (= X confers pressure on Y)

With metrical or numerical attributes we can use compound constructions analogous to:

**X date major (metro de) longo** Y’ = **X lengthens** Y (= X gives more length to Y)

Where the context makes the dimension or direction explicit, the second amplifier is redundant, and we can simply put:

**date major** = *increase, augment, enlarge, add, heighten, deepen, steepen, multiply, strengthen, exacerbate, amplify.*

**Date** does most of the work of the Basic English operator *make* (*to give heat = to make hot*) ; and is always equivalent to it, when the amplifier stands for a colour, e.g. : **date rhodo** Y = **make** Y pink (398)

In accordance with the formula given above, the direct object of a **date** couplet is the indirect object of the equivalent Anglo-American verb. When there are two objects the prescribed pattern is:

**date credito** Y de Z = **lend Z to Y** (186)

**date prospecto** Y de Z = **show Z to Y** (377)

Amplifiers which go with **date** may be physical states or logical categories, e.g. (105) **cleisto** *(the state of inclusion in a larger whole)* :

**date cleisto** = *include, contain, (hold), envelop*

no **date cleisto** = *omit, exclude*

The following constructions call for special comment:

**date (physio de) liquo** Y (per thermo) = **liquefy** Y; melt Y ; . . . (per frigo) = **condense** Y ; **date (physio de) stereo** Y = **solidify Y, freeze Y** ; **date (physio de) vaporo** Y (per thermo) = **boil** Y ; . . . minus thermo = **evaporate Y.**
All date couplets are transitive, though the object may be implicit. Usually they are causative. The meaning of date couplets with appropriate amplifiers is in the list on pp. 196-206, at the end of this chapter.

(467) detecte, find (out); discover(y); detection
   ge detecte = found, discovered
   u detecte-pe = a discoverer

The formula for a couplet involving detecte and an amplifier (A) is: X finds the A of Y. If A is a metrical property (e.g. length) this is the same as measures the A of Y or X finds how A Y is. If A is a physical state (electrification, heat) it is the same as: X sees if Y is A, in which A is the adjectival equivalent. If A is a spatially localized reaction (breaking) or result of an action (puncture), it is the same as: locate the A of Y. Thus we have:

detecte defecto Y = find the fault in Y (197)
detecte tem Y = find how long Y takes (75)
detecte longo Y = measure the length of Y (290)
detecte thermo Y = see if Y is hot (437)
detecte electro Y = see if Y is charged up (211)
detecte magneto Y = see if Y is magnetized (295)
detecte nssuro Y = locate the crack in Y (231)
detecte pylo Y =* = locate the leak in Y (383)

Important constructions involving qualifying amplifiers are:
detecte electro alto Y = find the voltage of Y (211) (150)
detecte proximo metro Y = make a rough estimate (measurement) of Y (121) (114)
detecte proximo numero Y = make a rough estimate (count) of Y(121) (327)
detecte ratio de rheo Y = find the rate of flow of Y; find the current strength of Y (397) (389)
detecte alto de thermo Y = find the temperature of Y (437) (150)

The amplifiers indicated by number below form detecte couplets which do service for single Anglo-American verbs in accordance with the following paradigm based on (100) topo :

detecte topo Y = locate Y (= find the position of Y)

(104) diagnose Y; analyse Y; infer from Y; (noun) diagnosis; analysis; inference; induction
(108) try Y on; try Y out; see if Y fits; find if Y is suitable

(114) measure Y; estimate Y; assay Y; (noun) measurement; assay; estimation

(122) deduce from Y; conclude from Y; (noun) deduction (180) see the humour in Y; see the joke (199) prove; (demonstrate); (show)

(223) analyse Y (= find the composition of Y); (chemical) analysis

(259) distinguish Y from Z (Y de Z).

(298) weigh Y; (noun) weighing

(327) count Y; compute Y; (noun) enumeration; computation (371) cost Y; (noun) costing

(373) multiply Y by Z (Y latero Z); (noun) multiplication; divide Y by Z (Y supero Z); (noun) division

(431) add Y to Z (Y plus Z); (noun) addition; take Z from Y (Y minus Z); (noun) subtraction

Detecte couplets do the work of all numerical calculation, e.g.: detecte ratio X de Y = find (calculate) the proportion of X to Y; find the ratio X/Y (389) detecte bi iso diviso Y = find (calculate) the square root of Y (204)

(468) dicte, say; tell; communicate; express

u dicte-pe = the speaker

Dicte is the transitive operator for use with any amplifier (A) which stands for an act of communication; but we can extend its use to convey expression of any communicable sentiment or valuation, i.e. a sentiment or valuation which has communicative rank in a particular context. The object is the person who receives the communication. Thus the general formula is:

X dicte A Y de Z = X communicates the A about Z to Y, or X expresses A about Z to Y

Hence the direct object of a single Anglo-American verb equivalent to a dicte couplet may be a word connected with the latter by the empty particle de or other preposition-equivalent, e.g.:

X dicte malo Y de Z = X condemns Z to Y (296),
X dicte protesto Y de Z. = X complains about Z to Y; X protests
against Z ta Y (378) X dicte erro Y de Z = X misleads Y about Z (215)

The object nexus may be more complex, e.g. :
X dicte aetio Y anti Z causa F = X blames Z for P to Y; X accuses Z of P to Y (147)

More usually with (147) aetio anti (accusation) the object is implicit, and we have :

dicte aetio anti Z causa P = blame Z of P; accuse Z of P; reprimand Z because of P

With impero (266) we have positive and negative couplets :
dicte impero Y de . . . = command Y to . . . ; order Y to . . .
dicte impero Y de non . • . = forbid Y to . . . ; prohibit Y from . . .

To say no about something is to refuse, decline, reject or deny, according to the context. Accordingly we have :
dicte no de Z = refuse Z; reject Z; deny Z; decline Z

(469) eque, be (something or somebody)
proto eque = become (something or somebody) (139)

Eque and proto eque respectively mean be or become only when the complement is substantival, i.e. when they respectively signify being or beginning to be : (a) a particular thing or person ; (b) a particular example of a class of things or persons, e.g.:

(a) George 6 eque u nu regi de Britain
George VI is the present king of Britain

(b) Plu homini eque plu crea-phago zoa
Man is a carnivorous animal

Otherwise we usually express be in one of two ways :.

(a) Use of babe as copula between topic and attribute, e.g. :
re babe thermo = it is hot (i.e. it has heat)

(b) Use of habe bio (creatures) and habe accido (things or situations) to signify existence or occurrence :

Un habe bio allo u non habe bio = To be or not to be
Pan re ; su habe accido ; habe eu = Whatever is, is right
Note the following useful constructions:

- *eque u mero-ma de Y* = *be present in Y* (be an ingredient of Y)
- *non eque u mero-ma de Y* = *be absent in Y* (not be an ingredient of Y)
- *proto eque u mero-pe de Y* = *join Y* (i.e. become a member of Y)

(470) *esthe,* experience, feel(ing)

In accordance with the rule given on p. 54, an operative couplet must involve an amplifier (A) which stands for a personal state (affective or cognitive). Its meaning is: *experience the sentiment A in relation to the object Y which follows, or (if there is no object) simply: experience the sentiment A.* Thus we have:

- *mi esthe espero re* = *I hope so* (130)
- *mi esthe fatigo re* = *I am tired of it* (256)

Some Anglo-American verbs correspond to negative constructions:

- *X non esthe assuro Y* = *X doubts Y* (X does not feel certain about Y)

(155)

- *X non pre esthe expecto Y* = *X was surprised by Y* (223)

It is permissible to use *esthe* with amplifiers not placed in class (f) on p. 170 ???, if the context endows them with affective significance. Thus we may say:

- *esthe lyso* = *be lonely, lonely, loneliness* (293)
- *esthe no-facilo (de) Y* = *find Y difficult* (224)
- *esthe immuno* = *feel safe* (264)
- *esthe viro (de) Y* = *be apprehensive about Y* (456)

Note the special construction: *esthe u perde de* = *miss* (feel the loss of)

(471) *facte,* make; construction); manufacture; devise

- *u facte-pe* = *maker*
- *u facte-me* = *a generator*
- *ge facte* = *synthetic; manufactured; artificial*

Facte means *make* only when *make* is replaceable by *construct*; and hence forms couplets only with amplifiers which can have a concrete meaning:

- *facte fascio* = *collect; assemble* (tr.); *gather; compile*
- *facte hydro* = *synthesize water*
facte neo specio = copy
facte picto = portray
facte picto per carba = sketch; draw
facte picto per chromo = paint a picture
facte stigmo = make a mark; blot; smudge; mark

Facte provides equivalents for several Anglo-American verbs in combination with a substantival object:

facte u domi = build
facte u fi = spin
facte u texti = weave
facte u farina de = grind, powder (643)

Note also:

facte lineo hypo = underline
facte Y proto = invent Y
u neo facte = an invention
un anemo facte-me = fan; bellows

(472) ge, that has got; that has been

It is necessary to add only three comments to previous remarks upon the use of ge (pp. 51-52):

(a) Ge gives any amplifier=simple or complex=the meaning equivalent to that of the corresponding passive participle. The provision of a separate passive particle with this function permits recourse to constructions which the grammatical etiquette of Anglo-American usage excludes from the repertoire of Basic English. The Anglo-American flexion which endows a verbal root with a passive meaning in an adjectival context cannot attach itself to an intransitive verb root in the same situation. If we split a transitive verb (e.g. leave) into an intransitive one with an adverbial qualifier (e.g. go away without), we then have to restrict ourselves to the active domain. For to leave a book in a train it is permissible to put go away from the train without a book; but it is not in keeping with the Anglo-American idiom to paraphrase a book left in a train by the expression a book gone away from the train without. That we cannot do so is merely the penalty of having the passive flexion glued to the verb itself. If we have an independent passive particle, there is nothing to prohibit its association with any verbal nexus which may have a transitive meaning, if taken as a whole. Thus we can legitimately say:
kine apo minus Y = leave Y behind; forsake Y
ge kine apo = left behind; forsaken; abandoned

Thus we may put:

un infanti, ge kine apo = an abandoned baby.
u ge kine apo domi = a forsaken house.

(b) The correspondence between ge and the passive flexion is not one to one. If an amplifier stands for a passive state (e.g. heat), its use as an adjectival qualifier (p. 131) predicates that the substantive qualified possesses the state; and its meaning may be inherently passive. Thus a hot fluid is a fluid which has been heated. The adjectival meaning given for each of the amplifiers in Chapter VI shows whether it is or is not necessary to preposit ge in order to give the epithet a passive content. All amplifiers which stand for actions require ge to that end. Thus we have:

vesto = covering
thermo = hot, heated
ge vesto = covered
su date thermo = heating (= conferring heat)

(c) Since ge means su pre gene (that has got), there is nothing to prevent the use of ge as a substantive qualifier, e.g.:

Hypo ge astra syn phylla urani
Beneath a starred and leafy sky

(473) gene, get; acquire; receive; receipt or acquisition (in the abstract sense). The literal significance of gene is complementary to that of date, and it has a complementary metaphorical extension of meaning like the Basic English get. To get cold is to acquire the property of coldness, hence to become cold. Gene is equivalent to become only when associated with an abstraction. When become expresses incipient identification, we use the couplet proto eque (469).

Gene is the operator which makes it possible to dispense with the intransitive Aryan verb-forms corresponding to the causative ones made by combination of date, acte, dicte or esthe with an amplifier. In all constructions of the type indicated below, the epithet follows immediately after the operator. From the previous items of our word-list, we get such intransitive verbs as:

gene proto (ex) = begin; originate (from); come (from) (139)
gene fino = end (intr.); finish (intr.); stop (intr.)(229)
gene profito (causo) = profit (by) ; be benefited (by) (374)

The last illustrates the rule that a gene couplet can do service as the passive equivalent of the date construction with the same amplifier; but its use as a passive operator is not restricted to the semantic domain of date. Like its opposite perde, gene can combine with any amplifier to form the equivalent date passive construction. Remarks concerning date major and date couplets with metrical attributes apply mutatis mutandis to gene major. According to context we have:

gene major ~ enlarge; increase; gain; multiply; grow; - add to itself; get quicker; steepen; heighten, etc.

The intransitive equivalents of date (physio de) liqtio, etc., are:

Gene (physio de) liquo (per thermo) = melt, thaw, fuse;
. . . (per frigo) = condense; gene (physio de) stereo = solidify, freeze; . gene (physio de) vaporo (per thermo) = boil; ... (minus thermo) = evaporate.

Gene couplets convey the passive meaning of corresponding constructions with acte, “dicte and stimule. When the amplifier is a physical state, we can then express the passive by means of a habe couplet; but it is better to use the gene construction when an explicit agent follows, e.g.:

U porta pre habe claustro = The door was shut;
the door was closed (723) (175)
U porta pre gene claustro ex fe = The door was shut by her

There is a list of gene couplets on pp. 196-206 at the end of this chapter.

(474) habe, have; possession The value given above is the literal one referring to possession of things or persons : . -

An habe mega domi ~ He has a large house
Fe pre habe u palaeo anthropi = She had an old husband

Just as we speak of an attribute of a thing as one of its properties, we may extend the literal meaning of habe to the possession of abstract qualities and relationships. This has a consequence that will be less novel to a Swede or to a Frenchman (cf. fai froid, etc.), than to an American or Britisher. Habe is the universal copula connecting attribute and epithet.
Sometimes this is self-evident. A thing *has* rigidity* when it *is* rigid, and it *has* superiority to something when it *is* greater than it. Hence we have:

- **Re habe rigo** = *It is rigid; it is stiff* (399)
- **Re habe major de X** = *It is greater than X* (45)
- **Fe habe verito** = *She is right* (452)
- **An habe erro** = *He is wrong* (215)

Thus the couplet **habe eco** means *inhabit*, and as such does service in many situations where the English idiom *there is, there are, there were*, etc., crops up, e.g.:

- **Zero ophidia habe eco Island** = *There are no snakes in Iceland*

The couplets (53) **habe loco** (*has locality*) and (100) **habe topo** (*has position*) mean *is at* or *is in*, and naturally require 110 other preposition-equivalent after them:

- **Fe non pre habe loco Edinburgh** = *She was not at Edinburgh*
- **Re habe topo un in-centra de cycli** = *It is at the centre of a circle*

In a negative construction the use of **zero** is more emphatic than **no**, e.g.:

- **Re non habe rigo** = *It is not stiff* (399)
- **Re habe zero rigo** = *It is by no means stiff*

The significance of operator-amplifier couplets of **habe** should offer no difficulty when the amplifier signifies a quality or state. Such a couplet may correspond to a single intransitive verb or to a pseudo-passive construction, e.g.

- **habe bio** (*have life*) = *live, be alive* (161)
- **habe morto** (*have death*) = *die, berdead* (312)

To *have life* is good New Testament English; but the use of **habe** with prepositional amplifiers which have no equivalent abstract noun—see p. 132), more particularly with the *place-markers*, does not lend itself to direct transliteration. **In** stands for the, “*state of being inside*” (p. 134). Hence **habe in** = *be in(side)*. Accordingly we have:

- (77) **habe antero** = *be in front of, be anterior, to, precede* (spatially)
- (78) **habe apo** = *be apart; be away from*
- (80) **habe contra** = *be opposite; face*
- (84) **habe extra** = *be outside*
- (85) **habe hypo** = *be under; be below; underlie*
- (86) **habe in** = *be inside; be internal to; wear* (clothes)
Some of the above correspond to single English verbs:

**Un hydro habe peri holo Britain**
Water surrounds the whole of Britain

**U fenestra habe contra un a-supero-hell**
The window faces the rising sun

Some **habe** couplets do service for single Anglo-American verbs if we reverse the subject-object relation, as with **babe necesso** *(be necessary)*:

X **babe necesso pro Y** = Y needs X (= X is necessary on behalf of Y)

It is better to express the same relation by one or other of the following constructions:

X **non babe satio Y** = X has not enough Y
X **non babe u necesso Y** = X has not a necessary Y

Like **have**, **babe** stands for temporary *(tenure)* as well as for legal **possession**, and thus overlaps the domain of **hold** *(cf. tener in Spanish and Portuguese)*, predicating nothing more than close association of the subject and object. To make more explicit the legal relation implicit in **belong**, we can use **eque u propria de** *(847)*, e.g.:

**U domi eque u propria de an** = The house is his property

In the same way, X **belongs to the society** is X is a member of the society, i.e. :

X eque u mero-pe de grego

A construction for **hold X** is **Habe X in. . .** Thus we have :

**Fe habe re in chiri** = She is holding it (= she has it in her hand) *(493)*
**Re habe un hydro in auto** = It holds water; it contains water *(263)*
Since *habe* denotes temporary association, we can express *wear* in two ways analogous to the English constructions *she was in a green frock* (as above), or *she had on a green frock*, i.e.:

**Fe pre habe u cbloro toga epi auto**

*She had a green frock on (herself)* **Fe pre babe in u chloro toga**

She was in a green frock

We can express *lack* by *habe zero*, if the object is positive; but an alternative construction is appropriate if the object is negative:

(a) *X habe zero penna* = *X lacks a pen -
(b) *X habe pan necesso re* = *X lacks nothing (= has everything necessary)*

When *keep* is intransitive, it is equivalent to *duro babe*, e.g.:

* X duro babe frigo = *X keeps cold (240)*
* X duro babe bio = *X survives, keeps alive (161)*

With *ortho* (335) and *horizo* (269) we get constructions equivalent to *stand* and *lie*, e.g.:

**Fe habe ortho epi mura** = *She is standing on the wall (721)*
**Fe babe borizo epi terra** = *She is lying on the ground (663)*

With prepositional amplifiers *habe* may be equivalent to *lie*. Thus to *be between* (*habe inter*) is to *lie between*; to *be north (of)* (*habe boreo*) is to *lie north (of)*, e.g.:

* X habe epi Y = *X is lying on Y ; X floats on Y*
* X habe hypo Y = *X is lying under Y*

Two other *habe* constructions call for comment:

(a) **Habe satio minus** (have sufficiency without) is the construction for *to be able to spare*, e.g.:

**Qne tu habe satio minus re** = *Can you spare this ?*

(b) **Habe cleisto in iso geno** (have inclusion in the same class) is the construction for logical relationships, e.g.

**Mu habe cleisto in iso geno causo** . . .
*They are related to one another by . . .*
**Mu habe cleisto in quo geno** = *How are they related ?*
A construction which economizes space is consistent with the rule for postposition of the ordinal (p. 89):

Re habe ordino N = it is Nth on the list; it is the Nth; it is Nth in order (i.e. it has rank N)

In speaking of a situation we can say re habe frigo fit is cold), as we may also say:

Re habe (or acte) pluvio = It is raining

Of thunder (urani bronto) and lightning (urani pyro) it is more appropriate to put:

Un urani acte bronto = It thunders
Un urani gene pyro = There is lightning

Many habe couplets have a passive meaning, more especially if the amplifier stands for a sustained state; and in some situations it is a matter of taste whether we use gene on the one hand or babe on the other. Generally speaking, it is best to use gene A eX (with a personal agent) or gene A per (instrumental object) in preference to habe A eX (or per), i.e. gene is the more appropriate passive operator when there is an explicit agent or instrumental object. Not all babe couplets are passive or intransitive. Thus habe homo means resemble (= is like); and we can always omit a preposition=equivalent after a habe couplet which indicates the relation

ship sufficiently without it, i.e. whenever we might be tempted to put in the empty particle de (in relation to). The following list of habe couplets omits all simple copulative constructions such as habe chloro = be green:

(59) be dressed in (per); be covered by (per)
(04) go on; persist; continue
(104) be included in; be continued in
(106) “be comparable to
(107) be conditional on; be dependent on (ex)
(108) correspond to
(112) harmonize with, tally with
(113) resemble

(207) lead (impersonal subject); come first; have priority
(209) reside in; stay in; dwell in; live in; inhabit
(213) balance itself; be balanced;
(223) be composed of (ex);
(229) be over; be finished; be ended
(233) have the taste of; taste like

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(116) be hanging from (ex)  
(121) approximate to  
(124) touch (= be in contact with)  
(125) be attracted by (ad)  
(127) be replaced by (per)  
(133) See remarks above.  
(135) have the appearance of; seem to be  
(141) occur; exist; happen  
(145) be attached to; stick to  
(149) with non be accustomed to (something or someone)  
(153) be in office; have authority to (tendo) >  
(156) be postponed, delayed or put off by (causo)  
(158) be founded on (ex); be based on (ex)  
(161) live (= be alive)  
(170) have a certificate for; have graduated in; have passed (a test)  
(175) be shut in (in)  
(177) slope (intr.)  
(181) share Y with Z (Z de Y)  
(185) be under the control of (ex)  
(186) owe Y to Z (de Y ex Z)  
(198) is populated by (per)  
(199) be proven  
(206) be hanging from (ex)  
(238) happen often (= be frequent)  
(242) be repelled by (ex)  
(245) have a kink; be bent  
(248) be transmitted by (ex) ;be inherited from (ex)  
(286) be restricted by (causo)  
(316) be drugged; be narcotized  
(323) be called ,( = named)  
(328) have the chance of; have opportunity to  
(329) have the odour of; smell like  
(331) be responsible for  
(333) have the rank of  
(337) be standing; stand  
(340) be at peace with  
(342) project; stick out  
(374) be rewarded by (ex) ; be to  
(384) be burning  
(385) be endowed with  
(389) be proportional to  
(395) be resistant to  
(397) flow; pour over (intr.)  
(417) signify; (mean)  
(421) be dissolved in (per)  
(427) be at rest  
(460) have room for (pro)  

The semantic content of this operator is simply change-of position of the subject, e.g.:

Na kine e London a Paris = We are going from London to Paris..

Besides the simple constructions kine ex = go from, step off, and kine ad = go to or go towards, we have:

kine latero = skirt
kine antero = precede
kine retro = follow
kine a-supero = ascend, rise, climb
kine ad-hypo = descend, fall
kine peri = surround, circumscribe
kine proximo = approach
kine ultra = pass
kine apo = depart, leave
kine in = enter
kine extra = leave (room or building).
kine trans = cross, traverse
kine syn = accompany
kine apo minus = leave behind (i.e. come away without); forsake; abandon
kine ad-epi = mount
proto kine = start out
kine-posso = movable, movability

The combination kine para means come, but come often obtrudes into contexts in which its semantic content is exactly the same as that of go. The fact that it is necessary to include it in the Basic English word-list as an operator is an illustration both of the limitations which natural language structure imposes on the Basic method, and of the ingenuity with which its inventor has made the best of a bad job. The following is typical of the interchangeability of go and come:

An pre kine ad auto demo; plus mu non acte saluto an
He came unto his own, and they received him not

For row and sail we use kine with per copa (745) or per vela (783). For float we can use habe epi hydro, for fly kine in aero, and for hop kine per mono poda. Kine ad-hypo (descend) may mean set:

Un heli kine ad-hypo = The sun is setting, the setting sun

The construction kine a-supero (ascend, rise) does not mean get up (gene ortho). Thus:

Un heli kine a-supero = The sun is rising
An pre gene ortho = He rose, he got up, he stood up

(476) mote, shift; remove; move (trans.); put; place; set In contradistinction to the intransitive operator kine which predicates movement of
the subject, **mote**, *tracte* and **balle** predicate motion of the object *initiated* by the subject. **Mote** stands for induced motion without specific reference to its direction. **Tracte** implies motion directed towards the subject, **balle** motion directed away from the object. The general formula for **mote** is:

\[
P \text{ mote } Q \text{ ex } R \text{ ad } S = P \text{ shifts } Q \text{ from } R \text{ to } S
\]

It can signify *take* when *take* means *remove* without implying that the motion is *self*-directed:

\[
P \text{ mote } Q \text{ apo } R = P \text{ removes } Q \text{ from } R, P \text{ takes } Q \text{ from } R
\]

In combination with a large class of directive amplifiers, mote does the work of *put, place, set*, e.g.:

\[
\begin{align*}
P \text{ mote } Q \text{ latero } R & = P \text{ puts } Q \text{ beside } R \\
P \text{ mote } Q \text{ epi } R & = P \text{ puts } Q \text{ on } R \\
P \text{ mote } Q \text{ laevo } R & = P \text{ puts } Q \text{ to the left of } R \\
P \text{ mote } Q \text{ peri } R & = P \text{ puts } Q \text{ round } R \\
P \text{ mote } Q \text{ supero } R & = P \text{ puts } Q \text{ above } R \\
P \text{ mote } Q \text{ hypo } R & = P \text{ puts } Q \text{ under } R
\end{align*}
\]

As in English, the preposition need have no object-equivalent:

\[
\begin{align*}
P \text{ mote } Q \text{ apo} & = P \text{ puts } Q \text{ aside} \\
P \text{ mote } Q \text{ littora} & = P \text{ puts } Q \text{ at the edge} \\
P \text{ mote } Q \text{ dextro} & = P \text{ puts } Q \text{ on the right}
\end{align*}
\]

The following **mote** constructions cover the meaning of separate verbs:

\[
\begin{align*}
P \text{ mote } Q \text{ supero} & = P \text{ raises } Q \\
P \text{ mote } Q \text{ hypo} & = P \text{ lowers } Q \\
P \text{ mote } Q \text{ extra} & = P \text{ ejects } Q \\
P \text{ mote } Q \text{ in } & = P \text{ inserts } Q \text{ (in)} \\
P \text{ mote } Q \text{ peri } R & = P \text{ winds } Q \text{ around } R, P \text{ twists } Q \text{ round } R \\
P \text{ mote } Q \text{ in terra} & = P \text{ buries } Q \text{ (663)} \\
P \text{ mote } Q \text{ in liquo} & = P \text{ immerses } Q \text{ (288)}
\end{align*}
\]

The idiom of *Interglossa* does not tolerate such teleological usage as *P put out his hand*, The correct equivalent is *P’s hand went forward*:

208
U chiri de P pre kine ad-antero = P put out his hand
An pedi pre-kine ad-antero = He put his foot forward
U cephalo de P pre gene tropo a-supero = P lifted his head up
The following construction is Operative:

X mote vesto apo auto = X undresses himself (or herself)
(477) perde, lose; forfeit
u perde-pe = loser

The meaning of a perde couplet is opposite to that of a gene couplet with the same amplifier, e.g.:
gene thermo = warm, heat (intr.)
perde thermo = cool (intr.)

Thus perde couplets are essentially intransitive, reflexive or passive, without restriction of the semantic domain of the amplifier. If the amplifier (A) signifies a motion, its’ perde couplet signifies the A of X comes to a standstill; the A of X ceases; or the A of X stops, e.g.:
X perde gyro = X stops revolving; X ceases to rotate; X stops spinning (=X loses rotary motion)

Though the literal meaning of a perde couplet is intransitive, we can treat it as transitive, i.e. omit a preposition-equivalent between the verboid nexus and the substantive which follows, when it predicates a type of relationship so general that the only appropriate link would be de (in relation to). The same remarks apply to gene or habe couplets. Thus we can say:

Perde tacto Y = Lose contact with Y (124)

The couplets perde metro and perde numero do service for the intransitive verbs diminish, decrease, dwindle, according as they refer to measurement or enumeration. With metrical amplifiers we get equivalents for such intransitive verbs as shrink = perde volumo (459) and shorten = perde longo (290).

Where the agent of a passive perde construction is specified, the appropriate link is causo (pers.) or per (imp.)
A list of perde couplets is on p. 217 “at the end of this chapter.

(478) reacte, heed; respond to; react with; response; reaction

no-reacte = unresponsive; indifferent; indifference

11 reactema = a reagent

Reacte means: give the response appropriate to the situation

and is therefore roughly equivalent to the verb heed of Bible

English. Like heed it can mean, according to context, answer,

obey, listen, yield, acknowledge, submit, etc. Its usefulness de-

pends on the fact that we never need to use an amplifier as speci-

fied below, if the context sufficiently indicates the type of

reaction. In accordance with the formula on p. 54, we have the

following explicit combinations:

- reacte recipro = respond to one another; click (10)
- reacte petitio Y = comply (with a request of) Y (41)
- reacte questio Y = answer (a question of) Y (42)
- reacte tacto Y = feel Y (124)
- reacte volo Y = conform to the wishes of Y (128)
- reacte archo Y = submit to Y (153)
- reacte “baro Y = respond to the pressure of Y (157)
- reacte batho = be geotropic; be geotactic (159)
- no reacte chromo = be colour blind (174)
- reacte claustro = have claustrophobia (175)
- reacte comico Y = see the joke in Y (180)
- reacte controlo Y = submit to (the discipline or guid-

ance of) Y (185)

reacte critico Y = heed the criticism of Y (188)

reacte decoro (Y) = appreciate the beauty (of Y) (196)

reacte duco Y = follow Y (as leader) (207)

reacte major dyno (Y) = capitulate (to Y); surrender

(to Y) (208)

reacte fisco = pay one’s taxes (230)

reacte flavoro Y = taste Y (234)

reacte frigo = be sensitive to cold (240)

reacte grapho Y = answer (the letter of) Y (250)

reacte hydro = react to water (263)
reacte impacto Y = recoil from Y (265)
reacte impero Y = obey Y, comply with the orders of Y (266)
no reacte impero Y = disobey Y (266)
reacte lego = be law-abiding (280)
reacte musico = appreciate music (313)
reacte occasio Y = seize an opportunity, of Y (328)
reacte odoro Y = smell Y (329)
reacte offero Y = accept Y (330)
reacte pecunio Y = acknowledge the payment of Y (348)
reacte photo = be sensitive to light (359)
reacte phreno = be rational (= respond to reason) (360)
reacte pronto = be corruptible; be venal (374)
reacte protesto = take notice of a complaint (378)
reacte pyro = be combustible (384)
reacte saluto Y = acknowledge the salute (or greeting) of Y (404)
reacte scholo Y = pay attention to the teaching of Y (409)
reacte tensio = stretch (intr.) ; be elastic (434)
reacte thermo = be heat-sensitive (437)
reacte violo Y = withstand Y, put up a fight against Y (455)
reacte viro Y = be wary of Y (456)

(479) stimule, evoke; excite; stimulate; influence; (adj.) stimulating; inspiring; exciting
no-stimule = boring; boredom; (dull)

The general formula for operative couplets of stimule with an amplifier (A) is: X evokes the response A from Y; or if there is no explicit object: X evokes the response A. The response may be: (a) a sentiment or physiological state (e.g. hope, pain); (b) an immediate physical reaction (e.g. cracking) as opposed to a sustained condition or state; (c) an action (e.g. payment). Thus we have:

Remarks with reference to choice of acte and esthe or acte and habe (p. 191) apply mutatis mutandis to choice of stimule and date when the amplifier signifies a physical process. Stimule generally implies initiating, date initiating and sustaining, e.g. stimule phono u campani (676) or simply stimule u campani = (ring a bell), or date phono (= make a noise); but the distinction is not always as clear; and the choice of date or stimule is a matter of personal judgment.
stimule espero = encourage Y (130)
stimule fissuro Y = crack Y (231)
stimule pecunio Y = charge Y (348)

The meaning may be expressible in Anglo-American only by a causative construction involving make, etc., e.g. :

stimule cogito Y = make Y think; force Y to think (178)
stimule grado Y = make Y walk; induce Y to walk (249)

It is not necessary to make the response explicit in :
stimuie un artilleri = fire a gun (735)
stimule Y minus pre sympto = surprise Y (= take Y by surprise) (221)

stimule Y per offero = bribe Y (330)
stimule vendo Y = encourage the sale of Y (451)

If the amplifier is a motion or physical reaction, the stimule couplet is the transitive counterpart of the acte couplet, e.g. :

acte gyro = spin; rotate; revolve (intr.)
stimule gyro Y = spin Y; rotate Y; revolve Y

A list of stimule couplets is on p. 227 at the end of this chapter.

(480) tene, keep (tr.); maintain; retain; sustain; conserve; conservation; maintenance u tene-re = support; prop; rail; bulwark; scaffolding

By itself tene simply means keep; though the converse is not always true, e.g. :

X acte harmo u promisso de Z = X keeps a promise to Z
Re duro habe thermo = It keeps hot

As an operator in combination with an amplifier (A) signifying a state or relationship it is also transitive. Tene A Y means keep Y A or maintain (or conserve) the A of Y. The advantage of including tene in our list of operators is not that its couplets cover the meaning of many single verbs of other languages. They do not do so. Indeed, tene is not really necessary on grounds of word-economy. Thus £o. keep a thing hot is merely to prevent a thing from losing heat. What tene does for us is to short-circuit many long-winded expressions. It is shorter to say keep Y in Z than to say prevent Y from getting outside Z. Paradigms for most tene couplets are :
tene thermo $Y = \textit{keep } Y \textit{ hot} \quad (= \text{ conserve the heat of } Y)\\
tene no-thermo $Y = \textit{keep } Y \textit{ cool}$

The following amplifiers and their opposites conform to this pattern, i.e. $\textit{tene } AY = \textit{keep } YA$ (adjectival equivalent for the amplifier given in Chapter VI) :

(138), (143), (161), (171), (190), (196), (200), (213), (214), (232), (247), (248), (261), (263), (267), (268), (281), (284), (285), (321), (336), (349), (352), (356), (359), (364), (305), (3^7), (369), (3&z), (384), (391), (395), (398), (399), (401), (405), (407), (4*° > (414), (416), (420), (427), (433), (434), (437), (438), (442), (443), (446), (448), (452), (456), (458).

The following constructions do not tally precisely with the Basic English paradigm :

(100) prevent $Y$ from falling; keep $Y$ in its place; stop $Y$ moving
(105) restrict $Y$ to $Z$ (de $Z$) (in) keep $Y$ in use
(116) keep $Y$ dependent on $Z$ (de $Z$)
(128) keep $Y$ willing to (de)
(132) keep $Y$ accustomed to $Z$ (de $Z$)
(141) keep $Y$ going (151) keep $Y$ in a good temper
(153) keep $Y$ in office
(174) prevent $Y$ from fading
(214) keep $Y$ busy; keep $Y$ employed
(234) conserve the flavour of $Y$
(239) maintain friction between $Y$ and $Z$ (de $Z$) ; keep on rubbing $Y$ with $Z$ (de $Z$)
(258) keep $Y$ in servitude (slavery)
(283) keep $Y$ free from $Z$ (de $Z$)
(293) keep $Y$ separate from $Z$ (de $Z$)
(298) stop $Y$ from wearing away
(308) keep $Y$ reminded of $Z$ (de $Z$)
(329) conserve the odour of $Y$
(331) keep $Y$ in the right order
(343) keep $Y$ equidistant from $Z$ (de $Z$)
(347) maintain the rights of $Y$
(417) retain the meaning of $Y$

The following involve qualifying amplifiers or phrases •

\textit{tene stato } $Y \textit{ in liquo (or hydro)} = \textit{soak } Y; \textit{ let } Y \textit{ soak} ; \textit{ leave } Y
to soak; leave Y in a fluid; (427) (288)

**tene (physio de) liquo** Y = *keep Y liquid; prevent Y from boiling away* (if liable to get hot); *prevent Y from solidifying* (if liable to cool) (288) (361)

**tene (physio de) stereo** Y = *prevent Y from melting* (473) (361)

**tene (physio de) vaporo** Y = *prevent Y from condensing* (450) (361)

The reflexive construction **tene A auto** (keep oneself A) means the same as **duro habe**; but is more active in content, and therefore more appropriate in certain situations, e.g. :

**tene apo auto de** Y = *avoid Y; shun Y; keep out of the way of Y; abstain from Y*

**tene lyso auto de** Y = *not get mixed up with Y* (293)

**Tene** couplets do service for a few single Anglo-American verbs other than soak, shun, avoid, notably:

(98) **tene supero** Y = *support Y; prop up Y (= keep Y up)*

(263) **tene immuno** Y = *defend Y; guard Y; protect Y (= keep Y safe)*

With the negative particle we have the following constructions :

**no tene** Y = *give up Y; abandon Y*

**no tene archo auto** = *abdicate; resign; retire* (from office) (153)

**no tene ergo auto** = *retire* (from a job) (214)

There is no objection to the use of **tene** with **ge** couplets :

**tene ge plico** Y = *keep Y folded*

**tene ge tensio** Y *= keep Y stretched*

(481) **tracte**, draw; pull; take

**u tracte-re** = *a drawer* (of a chest)

Since **tracte** means *motion of the object initiated by the subject and directed away from the latter*, it means *take* when *take* has the force of *draw* or *pull*, but not when *take* means *carry* (**acte phoro**), nor in a host of idioms (e.g. *take trouble*) which Basic English incorporates in its catholic outfit. It enters into nonoperative constructions with place-markers, like **mote** or **balle**, e.g. :

**tracte Y apo** = *remove Y; take Y away; withdraw Y*; (78)

**tracte Y ex Z** “V ••= extract Y from Z” (83)

**tracte Y extra** = *extract Y* (84)
tracte $Y$ in auto $= absorb$ $Y$ (86)  
tracte $Y$ inter $= draw$ $Y$ through (87)  
tracte $Y$ a-supero $= pull$ $Y$ up (98)  
tracte $Y$ tele $= attract$ $Y$ (99)

The construction tracte $Y$ in auto covers the operations of eating and drinking or breathing (taking air in), and the qualification in auto is redundant if the context supplies the necessary clue. Thus acte bibo $= tracte$ liquo; acte phage $= tracte u$ phago-ma; acte pneumo $= tracte$ aero. Hence we get:

tracte toxo $= poison$ oneself $= take$ poison

This construction is an economy of space when we use eat or drink transitively, e.g.:

tracte $u$ crea $= acte$ phago $u$ crea (eat meat)

The importance of tracte resides in the operative use of tracte . . . apo. The formula tracte $A$ apo $Y$ means remove the $A$ of $Y$, e.g.:

tracte thermo apo $Y = cool$ $Y$

Thus tracte . . . apo and perde respectively stand in the same relation to date and gene. Any tracte . . . apo construction has the opposite meaning to a date couplet with the same amplifier; but there is no restriction on its semantic domain. By the same token, a perde couplet is the intransitive, passive, or reflexive equivalent of a tracte « . . apo construction.

Thus tracte metro apo $Y$ and tracte numero apo $Y$ respectively mean decrease $Y$, diminish $Y$, reduce $Y$, make $Y$ less, make $Y$ smaller, according as they refer to measurement or enumeration. Likewise we may put:

tracte longo apo $Y = shorten$ $Y$

There is a list of tracte . . . apo couplets on p. 196 at the end of this chapter.

(482) vise, see; look at; vision  
u vise-pe $= an$ observer duro vise $= watch$

Vise can operate only with amplifiers which stand for: (a) photic phenomena; (b) visible result of an action or reaction.  
(a) vise photo $= see$ a light (359)  
vise picto $Y = see$ a picture of $Y$ (362)
vise pyro = see afire (384)
vise reflecto Y = see the shine on Y (391)
(b) vise fissuro Y = see the crack in Y (231)
vise pylo Y = see the hole in Y (383)
vise schizo inter Y syn Z = see the split between Y and Z (408)
### TABLE OF COUPLETS WITH DATE, GENE, PERDE AND TRACTE . . . APO

*Note.*—**Gene** and **perde** can combine with amplifiers of *any* class to make passive equivalents of single Aryan verbs; and the ensuing list therefore omits some such constructions. When the agent is specified, the appropriate equivalent for *by* is **per impersonal** (i.e. the *means*). When *by* refers to the personal agent, the appropriate equivalent after a **gene** couplet is **ex**, after a **perde** couplet, **causo**. The range of **tracte . . . apo** is likewise unrestricted by the semantic domain of the amplifier. It can operate with an *action* or *personal state*.

<table>
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<tr>
<th></th>
<th>date</th>
<th>gene</th>
<th>tracte . . . apo</th>
<th>perde</th>
</tr>
</thead>
<tbody>
<tr>
<td>(44) iso</td>
<td>equalize</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(59) vesto</td>
<td>—</td>
<td>be dressed by <em>(ex)</em></td>
<td>undress Y</td>
<td>—</td>
</tr>
<tr>
<td>(100) topo</td>
<td>place ; set</td>
<td>be put</td>
<td>—</td>
<td>lose one’s way</td>
</tr>
<tr>
<td>(110) digito</td>
<td>—</td>
<td>be implied by <em>(ex)</em></td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(111) functio</td>
<td>find a use for</td>
<td>—</td>
<td>wear out <em>(tr.)</em></td>
<td>wear out <em>(intr.)</em></td>
</tr>
<tr>
<td>(112) harmono</td>
<td>harmonize Y and <em>(de)</em> ; make Y tally with <em>(de)</em></td>
<td>agree with <em>(de)</em> ; tally with <em>(de)</em></td>
<td>—</td>
<td>get out of step with <em>(metaph.)</em></td>
</tr>
<tr>
<td>(114) metro</td>
<td>—</td>
<td>—</td>
<td>diminish Y ; decrease Y ; xeduce Y</td>
<td>diminish, dwindle, de-crease, shrink</td>
</tr>
<tr>
<td>(116) pendo</td>
<td>hang <em>(tr.)</em> ; suspend</td>
<td>hang <em>(intr.)</em></td>
<td>unhang <em>(tr.)</em></td>
<td>—</td>
</tr>
<tr>
<td>(121) proximo</td>
<td>—</td>
<td>approach</td>
<td>—</td>
<td>recede</td>
</tr>
<tr>
<td>(124) tacto</td>
<td>touch Y with Z <em>(de Z)</em> ; make contact between Y and Z <em>(de Z)</em></td>
<td>get into contact with</td>
<td>—</td>
<td>get out of touch with</td>
</tr>
<tr>
<td>(125) tendo</td>
<td>aim Y at <em>(ad)</em></td>
<td>—</td>
<td>—</td>
<td>become aimless</td>
</tr>
<tr>
<td>(128) volo</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>become listless, become indifferent</td>
</tr>
<tr>
<td>(130) espero</td>
<td>—</td>
<td>—</td>
<td>discourage</td>
<td>be discouraged by <em>(causo)</em></td>
</tr>
<tr>
<td>(131) <strong>hedo</strong></td>
<td>—</td>
<td>become glad or happy</td>
<td>sadden Y; make Y miserable</td>
<td>become miserable</td>
</tr>
<tr>
<td>(134) <strong>permito</strong></td>
<td>allow; let</td>
<td>be allowed to</td>
<td>withdraw permission to (de)</td>
<td>—</td>
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<tr>
<td>(135) <strong>pheno</strong></td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>cease to seem</td>
</tr>
<tr>
<td>(136) <strong>posso</strong></td>
<td>make Y possible</td>
<td>become possible</td>
<td>make Y impossible</td>
<td>become impossible</td>
</tr>
<tr>
<td>(138) <strong>preparo</strong></td>
<td>make Y ready; prepare Y</td>
<td>exbe prepared by (ex)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(139) <strong>proto</strong></td>
<td>begin Y; start Y; initiate Y</td>
<td>begin; start (intr.); be started by</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(141) <strong>accido</strong></td>
<td>cause Y (To happen); bring Y into being</td>
<td>be brought about by (ex)</td>
<td>do away with; abolish</td>
<td>cease to exist</td>
</tr>
<tr>
<td>(142) <strong>acro</strong></td>
<td>Give a point to Y; sharpen <em>(the end of)</em> Y</td>
<td>—</td>
<td>blunt <em>(the tip of)</em> Y</td>
<td>get blunt <em>(at the tip)</em></td>
</tr>
<tr>
<td>(143) <strong>activo</strong></td>
<td>activate</td>
<td>be activated by (ex)</td>
<td>—</td>
<td>become inert</td>
</tr>
<tr>
<td>(144) <strong>acuto</strong></td>
<td>sharpen <em>(the edge of)</em> Y</td>
<td>be sharpened by (ex or per)</td>
<td>blunt <em>(the edge of)</em> Y</td>
<td>get blunt <em>(at the edge)</em></td>
</tr>
<tr>
<td>(145) <strong>adhesio</strong></td>
<td>stick Y on (epi); make Y adhere to (de); seal Y up</td>
<td>stick to</td>
<td>unstick Y; unseal Y</td>
<td>come unstuck</td>
</tr>
<tr>
<td>(146) <strong>aero</strong></td>
<td>air; ventilate</td>
<td>be ventilated by (ex)</td>
<td>—</td>
<td>leak</td>
</tr>
<tr>
<td>(147) <strong>aetio</strong></td>
<td>—</td>
<td>be blamed</td>
<td>exonerate</td>
<td>be exonerated by <em>(causo)</em></td>
</tr>
<tr>
<td>(149) <strong>alieno</strong></td>
<td>—</td>
<td>become distant</td>
<td>make Y familiar with (de)</td>
<td>become familiar; get at home with</td>
</tr>
<tr>
<td>(152) <strong>anemo</strong></td>
<td>blow on</td>
<td>—</td>
<td>—</td>
<td>become calm (of weather)</td>
</tr>
<tr>
<td>(153) <strong>archeo</strong></td>
<td>authorise Y; legalise Y</td>
<td>be authorised by (ex)</td>
<td>depose</td>
<td>be deposed</td>
</tr>
<tr>
<td>(154) <strong>arrogo</strong></td>
<td>—</td>
<td>—</td>
<td>humble; humiliate</td>
<td>humble oneself; be humiliated</td>
</tr>
<tr>
<td>(155) assuro</td>
<td>date</td>
<td>gene</td>
<td>tracte . . apo</td>
<td>perde</td>
</tr>
<tr>
<td>---</td>
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<td>—</td>
<td>make Y doubt; unsettle Y</td>
<td>(begin) to doubt; lose confidence; become uncertain</td>
</tr>
<tr>
<td>(157) baro</td>
<td>compress Y</td>
<td>be compressed</td>
<td>decompress (tr.)</td>
<td>become decompressed</td>
</tr>
<tr>
<td>(158) baso</td>
<td>justify, vindicate</td>
<td>be justified by (ex)</td>
<td>invalidate</td>
<td>cease to be valid</td>
</tr>
<tr>
<td>(161) bio</td>
<td>—</td>
<td>come to life</td>
<td>kill; murder</td>
<td>die</td>
</tr>
<tr>
<td>(162) blasto</td>
<td>—</td>
<td>sprout; bud</td>
<td>—</td>
<td>—</td>
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<tr>
<td>(164) catalyso</td>
<td>—</td>
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<tr>
<td>(167) cavito</td>
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<tr>
<td>(169) celero</td>
<td>—</td>
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<tr>
<td>(170) certifo</td>
<td>give a certificate to Y of (de)</td>
<td>graduate; get a certificate for (de)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(171) chloro</td>
<td>make Y green</td>
<td>get green</td>
<td>—</td>
<td>become aetiolated</td>
</tr>
<tr>
<td>(172) cholo</td>
<td>—</td>
<td>—</td>
<td>calm Y down; pacify</td>
<td>regain one's temper</td>
</tr>
<tr>
<td>(174) chromo</td>
<td>dye Y; colour Y; paint Y; stain Y</td>
<td>be dyed</td>
<td>Y. make Y fade</td>
<td>fade (intr.)</td>
</tr>
<tr>
<td>(175) claustro</td>
<td>shut Y in; shut Y up</td>
<td>be shut in</td>
<td>open Y</td>
<td>open (intr.)</td>
</tr>
<tr>
<td>(177) clino</td>
<td>make Y slope; tilt Y</td>
<td>slope (intr.); tilt</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(185) controlo</td>
<td>—</td>
<td>be controlled by (ex)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(186) credito</td>
<td>lend Z to Y (Y de Z)</td>
<td>borrow Z from Y (de Z ex Y)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(187) credo</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>cease to believe; lose faith in</td>
</tr>
<tr>
<td></td>
<td>date</td>
<td>gene</td>
<td>tracte . . apo</td>
<td>perde</td>
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</tr>
<tr>
<td>(224) facilo</td>
<td>make Y easy</td>
<td>get easy</td>
<td>make Y difficult</td>
<td>get difficult</td>
</tr>
<tr>
<td>(227) fero</td>
<td>—</td>
<td>become wild</td>
<td>domesticate Y</td>
<td>get domesticated</td>
</tr>
<tr>
<td>(228) fertilo</td>
<td>fertilize (an egg)</td>
<td>be fertilized by (ex)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(229) fino</td>
<td>finish Y; end Y; abolish Y; put an end to Y</td>
<td>finish (intr.); end (intr.)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(232) fixo</td>
<td>tighten Y; make Y firm</td>
<td>get tightened; be tightened by (ex or per)</td>
<td>loosen Y</td>
<td>get loose</td>
</tr>
<tr>
<td>(234) flavoro</td>
<td>flavour Y</td>
<td>be flavoured by (per)</td>
<td>make Y insipid</td>
<td>become insipid</td>
</tr>
<tr>
<td>(235) major forto</td>
<td>intensify Y; make Y dark (of colours)</td>
<td>be intensified by (per)</td>
<td>make Y pale (of colours)</td>
<td>get pale (of colours)</td>
</tr>
<tr>
<td>(240) frigo</td>
<td>make Y cold</td>
<td>get cold</td>
<td>warm up Y (if previously cold)</td>
<td>warm up (intr.)</td>
</tr>
<tr>
<td>(243) fumo</td>
<td>give off smoke; smoke Y (fish); ex Y (a pipe, etc.)</td>
<td>—</td>
<td>—</td>
<td>stop smoking (intr.)</td>
</tr>
<tr>
<td>(244) gameo</td>
<td>—</td>
<td>—</td>
<td>divorce Y</td>
<td>get divorced from</td>
</tr>
<tr>
<td>(246) gluco</td>
<td>make Y pleasant; make Y comfortable (imp.); sweeten Y</td>
<td>become pleasant</td>
<td>make Y unpleasant; make Y uncomfortable (imp.)</td>
<td>become unpleasant; become uncomfortable (imp.)</td>
</tr>
<tr>
<td>(248) gono</td>
<td>inflect Y; bend Y</td>
<td>get a kink; get bent</td>
<td>straighten out Y</td>
<td>get straight</td>
</tr>
<tr>
<td>(252) gravito</td>
<td>—</td>
<td>—</td>
<td>stop Y falling; stop Y sinking</td>
<td>stop falling; stop sinking</td>
</tr>
<tr>
<td>(253) gravo</td>
<td>make Y important</td>
<td>get important</td>
<td>make Y unimportant</td>
<td>become trivial</td>
</tr>
<tr>
<td>(255) gyro</td>
<td>—</td>
<td>—</td>
<td>stop Y spinning; stop Y&quot; revolving; stop Y&quot; rotating</td>
<td>stop spinning; stop revolving; stop rotating</td>
</tr>
<tr>
<td>(190) crypto</td>
<td>hide Y; conceal Y; secrete Y</td>
<td>hide (intr.), etc.; be concealed by (ex)</td>
<td>expose Y; reveal Y</td>
<td>be revealed by (causo); be exposed by (causo)</td>
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<tr>
<td>(194) curvo</td>
<td>curve Y; (bend) Y</td>
<td>be curved by (ex); be bent by (ex); bend (intr.); curve (intr.)</td>
<td>straighten out Y</td>
<td>get straight</td>
</tr>
<tr>
<td>(196) decoro</td>
<td>beautify Y</td>
<td>become beautiful</td>
<td>make Y ugly</td>
<td>get ugly</td>
</tr>
<tr>
<td>(197) defecto</td>
<td>blemish Y</td>
<td>get blemished</td>
<td>make Y flawless; make Y all right</td>
<td>get all right</td>
</tr>
<tr>
<td>(198) demo</td>
<td>people Y</td>
<td>be peopled by (ex)</td>
<td>depopulate Y</td>
<td>be depopulated by (causo)</td>
</tr>
<tr>
<td>(200) desicco</td>
<td>dry Y; desiccate Y</td>
<td>be dried by (ex)</td>
<td>moisten Y</td>
<td>get moist</td>
</tr>
<tr>
<td>(207) duco</td>
<td>put Y first; give priority to Y</td>
<td>get priority; be put first</td>
<td>—</td>
<td>lose priority</td>
</tr>
<tr>
<td>(209) eco</td>
<td>put Y up; entertain Y; give Y hospitality; shelter Y</td>
<td>be entertained by (ex); be sheltered by (ex)</td>
<td>evict Y; turn Y out of doors</td>
<td>be evicted by (causo)</td>
</tr>
<tr>
<td>(210) electio</td>
<td>give Y the choice of</td>
<td>get the choice of</td>
<td>deprive Y of the choice of</td>
<td>—</td>
</tr>
<tr>
<td>(211) electro</td>
<td>electrify Y; charge Y</td>
<td>be charged by (ex)</td>
<td>discharge Y</td>
<td>be discharged by (per)</td>
</tr>
<tr>
<td>(212) elemento</td>
<td>simplify Y</td>
<td>—</td>
<td>complicate Y</td>
<td>get complicated</td>
</tr>
<tr>
<td>(213) equatio</td>
<td>balance Y</td>
<td>balance (intr.)</td>
<td>upset Y; tip Y over</td>
<td>get upset; be tipped over by (per)</td>
</tr>
<tr>
<td>(214) ergo</td>
<td>employ Y; give Y work</td>
<td>be employed by (ex)</td>
<td>deprive Y of work; discharge Y; sack Y</td>
<td>be discharged; be sacked for (causo)</td>
</tr>
<tr>
<td>(215) erro</td>
<td>—</td>
<td>—</td>
<td>X correct Y; put Y right</td>
<td>be corrected</td>
</tr>
<tr>
<td>(220) excesso</td>
<td>—</td>
<td>—</td>
<td>moderate Y;</td>
<td>—</td>
</tr>
<tr>
<td>(22–3) fabrico</td>
<td>—</td>
<td>—</td>
<td>decompose Y</td>
<td>decompose (intr.); be decomposed by (per)</td>
</tr>
<tr>
<td>(258) helo</td>
<td>enslave Y</td>
<td>be enslaved by (ex)</td>
<td>emancipate Y; liberate Y</td>
<td>get emancipated; get liberated</td>
</tr>
<tr>
<td>(259) hetero</td>
<td>make Y different from (de)</td>
<td>become different from</td>
<td>make Y like; make Y resemble</td>
<td>become like; come to resemble</td>
</tr>
<tr>
<td>(261) horizo</td>
<td>make Y horizontal; lie down (on the ground)</td>
<td></td>
<td></td>
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<tr>
<td>(262) hospito</td>
<td>water Y; irrigate Y</td>
<td>be entertained by</td>
<td>dehydrate Y; dry Y</td>
<td>be dehydrated by (per)</td>
</tr>
<tr>
<td>(263) hydro</td>
<td>water Y; irrigate Y</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(264) immuno</td>
<td>make Y safe</td>
<td>be protected by; be defended by</td>
<td>make Y vulnerable to (de)</td>
<td>become vulnerable to (causo)</td>
</tr>
<tr>
<td>(267) inflatio</td>
<td>inflate Y; distend Y; make Y swell</td>
<td>swell (intr.); distend (intr.); be inflated by (per)</td>
<td>deflate Y</td>
<td>collapse; become flaccid; be deflated by (per)</td>
</tr>
<tr>
<td>(281) leuco</td>
<td>whiten Y</td>
<td>whiten (intr.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(283) libero</td>
<td>free Y; set Y free; liberate Y; let Y go</td>
<td>be liberated by (ex)</td>
<td>enslave</td>
<td>become enslaved to (de)</td>
</tr>
<tr>
<td>(291) luco</td>
<td>make Y clear</td>
<td>get clear</td>
<td>make Y opaque; make Y murky</td>
<td>become opaque; become murky</td>
</tr>
<tr>
<td>(293) lyso</td>
<td>separate Y from (de)</td>
<td>separate out; get separated</td>
<td>reunite Y and (syn)</td>
<td>get reunited</td>
</tr>
<tr>
<td>(295) magneto</td>
<td>magnetize Y</td>
<td>get magnetized by (per)</td>
<td>demagnetize Y</td>
<td>be demagnetized by (per)</td>
</tr>
<tr>
<td>(296) malo (297) mano</td>
<td>make Y bad</td>
<td>become evil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(298) masso</td>
<td>load Y</td>
<td></td>
<td>lighten Y</td>
<td></td>
</tr>
<tr>
<td>(299) maturo</td>
<td>ripen Y; make Y grow</td>
<td>ripen (intr.); grow (intr.); develop (intr.)</td>
<td>concentrate Y</td>
<td>become concentrated</td>
</tr>
<tr>
<td>(311) morpho</td>
<td>mould Y; fashion Y; shape Y; carve Y</td>
<td>be moulded by (ex)</td>
<td>destroy the shape of Y</td>
<td>lose one's shape</td>
</tr>
<tr>
<td>(314) muto</td>
<td>date</td>
<td>gene</td>
<td>tracte...apo</td>
<td>. perde</td>
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<tr>
<td>(317) natio</td>
<td></td>
<td>naturalize Y</td>
<td>get naturalized</td>
<td>deprive Y of nationality</td>
</tr>
<tr>
<td>(318) nato</td>
<td></td>
<td></td>
<td></td>
<td>—</td>
</tr>
<tr>
<td>(321) neo</td>
<td></td>
<td>renovate Y</td>
<td>get renovated</td>
<td></td>
</tr>
<tr>
<td>(323) nomine</td>
<td></td>
<td>name ; (call)</td>
<td>be called</td>
<td></td>
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<tr>
<td>(327) numero</td>
<td></td>
<td>number</td>
<td></td>
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<tr>
<td>(329) odoro</td>
<td></td>
<td>perfume Y ; scent Y ; make Y smell like (homo)</td>
<td>smell (intr.)</td>
<td>deodorize Y</td>
</tr>
<tr>
<td>(331) onero</td>
<td></td>
<td>make Y responsible for; make Y answerable for;</td>
<td></td>
<td></td>
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<tr>
<td>(333) ordino</td>
<td></td>
<td></td>
<td></td>
<td>change the order of Y</td>
</tr>
<tr>
<td>(336) ortho</td>
<td></td>
<td>put Y upright; make Y vertical; stand Y up</td>
<td>get up ; rise (pers.)</td>
<td></td>
</tr>
<tr>
<td>(339) pachyo</td>
<td></td>
<td>thicken Y</td>
<td>get thick; thicken (intr.)</td>
<td>make Y thin ; make Y narrow ; make Y slender</td>
</tr>
<tr>
<td>(341) palco</td>
<td></td>
<td>age Y</td>
<td>age (intr.)</td>
<td>rejuvenate Y</td>
</tr>
<tr>
<td>(342) papillo</td>
<td></td>
<td>make Y stick out; make Y project</td>
<td>stick out; project (intr.)</td>
<td></td>
</tr>
<tr>
<td>(347) patho</td>
<td>make Y sick ;l make Y ill</td>
<td>sicken; get ill</td>
<td>heal Y ; cure Y</td>
<td>recover (intr.); get better</td>
</tr>
<tr>
<td>(349) pedio</td>
<td>rejuvenate Y</td>
<td>—</td>
<td>—</td>
<td>age Y</td>
</tr>
<tr>
<td>(351) peno</td>
<td>—</td>
<td>be punished by (ex)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(354) phanero</td>
<td>make Y manifest; make Y clear; make Y explicit</td>
<td>—</td>
<td>muddle up Y; obfuscate Y</td>
<td>—</td>
</tr>
<tr>
<td>(357) phono</td>
<td>make a noise ; sound (intr.)</td>
<td>—</td>
<td>quieten Y; make Y quiet s</td>
<td>become quiet; become still</td>
</tr>
<tr>
<td>(359) photo</td>
<td>illuminate Y; give light to Y; shine on Y</td>
<td>be illuminated by (per)</td>
<td>dim Y ; darken Y</td>
<td>dim (intr.); darken (intr.)</td>
</tr>
<tr>
<td>(364) plato</td>
<td>X flatten Y ; plane Y</td>
<td>get flat</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(365) pleno</td>
<td>fill Y with (per)</td>
<td>be filled by (ex) ; be filled with (per) ; get full</td>
<td>—</td>
<td>cease to be full</td>
</tr>
<tr>
<td>(366) plico</td>
<td>—</td>
<td>be folded by (per)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(367) pluto</td>
<td>enrich Y; make Y prosper</td>
<td>get rich</td>
<td>impoverish Y</td>
<td>become poor</td>
</tr>
<tr>
<td>(369) pneumo</td>
<td>—</td>
<td>—</td>
<td>chokeY; strangle Y; smother Y</td>
<td>choked (intr.); be smothered by (per)</td>
</tr>
<tr>
<td>(372) privilegio</td>
<td>endow with the right to; give Y the right to (tendo)</td>
<td>get the right to (tendo)</td>
<td>deprive Y of the right to; (with de electio = disfranchise)</td>
<td>lose the right to</td>
</tr>
<tr>
<td>(375) promisso</td>
<td>—</td>
<td>be promised by (ex)</td>
<td>withdraw a promise to Y of (tendo)</td>
<td>—</td>
</tr>
<tr>
<td>(376) proposo</td>
<td>—</td>
<td>—</td>
<td>withdraw a proposal ; withdraw the motion to (tendo)</td>
<td>—</td>
</tr>
<tr>
<td>(377) prospecto</td>
<td>show Y to Z (pro Z) ; exhibit Y; display Y</td>
<td>—</td>
<td>obscure Y</td>
<td>become invisible</td>
</tr>
<tr>
<td></td>
<td>gene</td>
<td>perde</td>
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<tr>
<td><strong>publico</strong></td>
<td>advertise Y; publicize Y</td>
<td>be advertised by (ex or per)</td>
<td>give Y privacy</td>
<td>get soiled</td>
</tr>
<tr>
<td><strong>puro</strong></td>
<td>clean Y; cleanse Y; purify Y</td>
<td>be cleaned by (ex or per)</td>
<td>soil Y; dirty Y; mess Y up</td>
<td>get dirty</td>
</tr>
<tr>
<td><strong>pylo</strong></td>
<td>be perforated by (ex or per)</td>
<td>seal up Y</td>
<td>get sealed up; fill up (in-tr.); (fill itself up)</td>
<td></td>
</tr>
<tr>
<td><strong>pyro</strong></td>
<td>to get on fire; to get alight; be burned by. (per or ex)</td>
<td>quench Y; stop Y burning</td>
<td>get quenched; stop burning</td>
<td></td>
</tr>
<tr>
<td><strong>radio</strong></td>
<td>irradiate Y</td>
<td>be irradiated by Y (per)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>recto</strong></td>
<td>straighten Y</td>
<td>be straightened out by (per or ex)</td>
<td>—</td>
<td>get uneven</td>
</tr>
<tr>
<td><strong>residuo</strong></td>
<td>leave Y behind</td>
<td>be left behind</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>resisto</strong></td>
<td>strengthen Y; reinforce Y</td>
<td>be strengthened by (per)</td>
<td>weaken Y; make Y conduct (electricity or heat) with (de)</td>
<td>weaken; get weak</td>
</tr>
<tr>
<td><strong>rigo</strong></td>
<td>stiffen Y; make Y rigid</td>
<td>be stiffened by (per); get stiff</td>
<td>make Y limp; make Y flaccid</td>
<td>get limp; get flaccid</td>
</tr>
<tr>
<td><strong>rugo</strong></td>
<td>roughen Y; coarsen Y</td>
<td>get rough</td>
<td>polish Y; make Y smooth</td>
<td>get smooth</td>
</tr>
<tr>
<td><strong>sano</strong></td>
<td>make Y healthy; cure Y; heal Y</td>
<td>get well; recover; get better</td>
<td>make Y ill</td>
<td>get ill; get run down; sicken</td>
</tr>
<tr>
<td><strong>sapro</strong></td>
<td>make Y decay; make Y putrid</td>
<td>putrefy; go bad; decay</td>
<td>arrest the decay of Y</td>
<td>stop decaying</td>
</tr>
<tr>
<td><strong>sclero</strong></td>
<td>harden Y</td>
<td>harden (intr.); get hard</td>
<td>soften Y</td>
<td>soften (intr.); get soft</td>
</tr>
<tr>
<td>term</td>
<td>definition</td>
<td>example</td>
<td>notes</td>
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<td>---------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
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<tr>
<td>sensitivo</td>
<td>make Y sensitive to (de)</td>
<td>get sensitive to (de)</td>
<td>make insensitive to (de) ; (with de algo means anaesthetize locally)</td>
<td></td>
</tr>
<tr>
<td>sensibl</td>
<td>make Y insensitive to (de)</td>
<td>precipitate Y</td>
<td>be precipitated by (per)</td>
<td></td>
</tr>
<tr>
<td>serio</td>
<td>list Y; arrange Y (in serial order)</td>
<td>go to sleep</td>
<td>waken Y</td>
<td></td>
</tr>
<tr>
<td>solution</td>
<td>dissolve Y</td>
<td>be dissolved in (per)</td>
<td>precipitate Y</td>
<td></td>
</tr>
<tr>
<td>soporo</td>
<td>bring Y to rest; halt Y; stop Y</td>
<td>come to rest; halt; stop Y</td>
<td>set Y in motion ; put Y in action</td>
<td></td>
</tr>
<tr>
<td>systemo</td>
<td>arrange Y; put Y in order; tidy up Y</td>
<td>be arranged by (ex)</td>
<td>disarrange Y; untidy Y</td>
<td></td>
</tr>
<tr>
<td>tensio</td>
<td>—</td>
<td>be stretched by (per)</td>
<td>relax Y; make Y slack</td>
<td></td>
</tr>
<tr>
<td>thermo</td>
<td>heat Y; warm Y up</td>
<td>heat up (intr.); warm up (intr.) get poisoned ;</td>
<td>cool Y</td>
<td></td>
</tr>
<tr>
<td>toxo</td>
<td>poison Y; make Y septic</td>
<td>be poisoned by (ex) ; be poisoned with (per)</td>
<td>detoxicate Y</td>
<td></td>
</tr>
<tr>
<td>umbro</td>
<td>shade Y</td>
<td>be shaded, by (per)</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>uniformo</td>
<td>regularize Y; make Y uniform</td>
<td>get regular</td>
<td>make Y irregular</td>
<td></td>
</tr>
<tr>
<td>vacuo</td>
<td>empty Y; evacuate Y; exhaust Y</td>
<td>empty itself ; be emptied by (ex)</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>valo</td>
<td>—</td>
<td>—</td>
<td>debase Y</td>
<td></td>
</tr>
<tr>
<td>victo</td>
<td>—</td>
<td>get victory over (anti) = vanquish ; conquer ; beat; defeat</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>viro</td>
<td>endanger Y</td>
<td>get into danger</td>
<td>Y make Y safe ; save Y from (de)</td>
<td></td>
</tr>
<tr>
<td>(460) volume</td>
<td>date</td>
<td>• gene</td>
<td>tracte . . . apo</td>
<td>perde</td>
</tr>
<tr>
<td>---------------</td>
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<td>-----------------</td>
<td>-------</td>
</tr>
<tr>
<td>make room for Y (pro Y); hold Y (i.e. have space for Y)</td>
<td>—</td>
<td>cut down space for Y</td>
<td>—</td>
<td></td>
</tr>
</tbody>
</table>

| (461) vulno | wound Y; make Y sore | get wounded; get sore; be wounded by (ex or per) | — | — |

| (864) concessio | let; lease | hire; rent | — | — |

**TABLE OF COUPPLETS WITH AGTE, DICTE, STIMULE AND ESTHE**

<table>
<thead>
<tr>
<th>(41) petitio</th>
<th>acte</th>
<th>dicte</th>
<th>stimule -</th>
<th>esthe</th>
</tr>
</thead>
<tbody>
<tr>
<td>—</td>
<td>request Y; invite Y; (ask Y)</td>
<td>prompt a question from Y</td>
<td>—</td>
<td></td>
</tr>
</tbody>
</table>

| (42) questio | — | (ask Y); question Y | — | feel curious about Y |

| (43) no | — | deny Y; refuse Y; decline Y | — | — |

| (59) vesto | dress Y; cover Y; coat Y | — | — | — |

<p>| (103) anti | oppose Y | malign Y (pers.); object to Y (Imp.) | antagonize Y | disapprove of Y; dislike Y |
| (107) <strong>conditio</strong> | — | state a condition to Y regarding (de) | — | — |
| (110) <strong>digito</strong> | indicate | point out; indicate; imply | — | — |
| (112) <strong>harmonio</strong> | act on | express agreement with reconcile Y with Z (de Z) | agree with Y |
| (113) <strong>homo</strong> | mimic; pretend; imitate | — | — | identify oneself with Y |
| (119) <strong>postulo</strong> | — | postulate; presuppose; assume | — | — |
| (125) <strong>tendo</strong> | aim at | intend; mean | — | intend; (mean) |
| (126) <strong>verso</strong> | retract | reverse Y | — | — |
| (128) <strong>volo</strong> | — | express a wish to make Y willing to (tendo) tempt y to (tendo) wish; want; desire; prefer |
| (129) <strong>debito</strong> | do one's duty | — | make Y feel obliged to; put Y under an obligation feel one ought to |
| (130) <strong>espero</strong> | — | express the hope that encourage hope (for) |
| (131) <strong>hedo</strong> | congratulate Y about (de); express pleasure please Y; gratify Y; amuse Y; entertain Y; make Y comfortable (pers.) enjoy; be pleased (about) |
| (134) <strong>permito</strong> | — | give permission to Y | — | — |
| (140) <strong>tentato</strong> | attempt; try | — | encourage Y |
| (143) <strong>activo</strong> | — | influence Y | — | — |
| (147) <strong>aetio</strong> | blame; reproach; condemn; accuse Y of (de) | make Y ashamed be ashamed of |
| (148) <strong>algo</strong> | — | pain Y; hurt Y; wound Y's feelings suffer on account of (causo); be hurt by (ex) |</p>
<table>
<thead>
<tr>
<th>(151) amico</th>
<th>acte</th>
<th>express friendship for</th>
<th>stimule</th>
<th>esthe</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>—</td>
<td>endear oneself to</td>
<td>like (a person)</td>
</tr>
<tr>
<td>(154) arrogo</td>
<td>acte</td>
<td>—</td>
<td>boast about Z (de Z) to Y</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td></td>
<td>—</td>
<td>flatter oneself; be proud of</td>
<td>—</td>
</tr>
<tr>
<td>(155) assuro</td>
<td>acte</td>
<td>—</td>
<td>express assurance that</td>
<td>reassure Y</td>
</tr>
<tr>
<td></td>
<td></td>
<td>—</td>
<td>feel sure; be certain</td>
<td>—</td>
</tr>
<tr>
<td>(156) attendo</td>
<td>acte</td>
<td>wait</td>
<td>delay Y; postpone Y; put Y off</td>
<td>—</td>
</tr>
<tr>
<td>(160) bibo</td>
<td>acte</td>
<td>drink Y; imbibe Y</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(163) bronto</td>
<td>acte</td>
<td>explode</td>
<td>make Y explode</td>
<td>—</td>
</tr>
<tr>
<td>(164) canto</td>
<td>acte</td>
<td>sing; carol; chirp</td>
<td>—</td>
<td>make Y sing</td>
</tr>
<tr>
<td>(165) captivo</td>
<td>acte</td>
<td>capture; catch; trap; (en)snare</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(166) catalyso</td>
<td>acte</td>
<td>help Y; assist Y; lubricate Y; catalyse Y</td>
<td>—</td>
<td>enlist the help of Y; engage the assistance of Y</td>
</tr>
<tr>
<td>(172) cholo</td>
<td>acte</td>
<td>express anger; express annoyance</td>
<td>anger Y; annoy Y; irritate Y</td>
<td>be angry (about)</td>
</tr>
<tr>
<td>(176) clepto</td>
<td>acte</td>
<td>steal; thief; rob; plunder</td>
<td>tempt Y to steal</td>
<td>—</td>
</tr>
<tr>
<td>(178) cogito</td>
<td>acte</td>
<td>—</td>
<td>make Y think about (de)</td>
<td>think about; ponder on; reflect on</td>
</tr>
<tr>
<td>(179) coito</td>
<td>acte</td>
<td>copulate</td>
<td>make a joke</td>
<td>seduce Y</td>
</tr>
<tr>
<td>(180) comico</td>
<td>acte</td>
<td>play the fool</td>
<td>—</td>
<td>see the joke in</td>
</tr>
<tr>
<td>(181) communio</td>
<td>acte</td>
<td>co-operate with Y</td>
<td>express sympathy for Z to Y (Y de Z); express agreement with</td>
<td>persuade Y</td>
</tr>
<tr>
<td></td>
<td></td>
<td>—</td>
<td>sympathize with; agree with Y</td>
<td>—</td>
</tr>
<tr>
<td>(182) competo</td>
<td>acte</td>
<td>compete with Y</td>
<td>express envy of Z to Y(Y de Z)</td>
<td>make Y jealous</td>
</tr>
<tr>
<td></td>
<td></td>
<td>—</td>
<td>be jealous of Y</td>
<td>—</td>
</tr>
<tr>
<td>(183) confessio</td>
<td>confess ; admit</td>
<td>make Y confess</td>
<td>feel in one's heart that</td>
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<tr>
<td>(184) consolo</td>
<td>console ; comfort</td>
<td>—</td>
<td>get comfort from (ex)</td>
<td></td>
</tr>
<tr>
<td>(185) controlo</td>
<td>control; guide; steer; direct</td>
<td>—</td>
<td>be under the influence of</td>
<td></td>
</tr>
<tr>
<td>(187) credo</td>
<td>express the belief that</td>
<td>convert Y</td>
<td>believe Y ; think Y</td>
<td></td>
</tr>
<tr>
<td>(188) critico</td>
<td>criticize Y</td>
<td>cause criticism of Y</td>
<td>have a conscience about</td>
<td></td>
</tr>
<tr>
<td>(189) cryo</td>
<td>snow</td>
<td>—</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>(191) culino</td>
<td>cook</td>
<td>—</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>(192) culto</td>
<td>grow Y ; cultivate Y</td>
<td>—</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>(193) culo</td>
<td>look after (pro)</td>
<td>express concern for (pro)</td>
<td>make Y careful</td>
<td>be concerned about</td>
</tr>
<tr>
<td>(201) disputo</td>
<td>—</td>
<td>argue about (de) ; dispute about (de)</td>
<td>cause argument about (de)</td>
<td>argue to oneself</td>
</tr>
<tr>
<td>(202) dissipo</td>
<td>waste Y; squander Y</td>
<td>—</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>(203) divino</td>
<td>—</td>
<td>make a guess; guess (oral-ly)</td>
<td>tantalize Y</td>
<td>guess; suspect</td>
</tr>
<tr>
<td>(205) drama</td>
<td>act (a play)</td>
<td>—</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>(206) dromo</td>
<td>run</td>
<td>—</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>(210) electio</td>
<td>choose ; elect; select</td>
<td>express a preference/or (tendo)</td>
<td>give Y the choice of (de) ; tempt Y (tendo)</td>
<td>—</td>
</tr>
<tr>
<td>(214) ergo</td>
<td>work ; toil; labour ; strive for (tendo)</td>
<td>—</td>
<td>get work out of Y</td>
<td></td>
</tr>
<tr>
<td>(215) erro</td>
<td>err ; make a mistake</td>
<td>say the.wrong thing</td>
<td>make Y go wrong</td>
<td>get the wrong impression about</td>
</tr>
<tr>
<td>(218) eu</td>
<td>do good to Y</td>
<td>—</td>
<td>reform Y</td>
<td>feel righteous about</td>
</tr>
<tr>
<td>(219) examino</td>
<td>test; experiment with; try on ; examine (a candidate)</td>
<td>say something to test Y</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(220) excesso</td>
<td>—</td>
<td>exaggerate Z to Y (YdeZ)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>acte</td>
<td>dicte</td>
<td>stimule</td>
<td>esthe</td>
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<tr>
<td>---</td>
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</tr>
<tr>
<td>(221) expecto</td>
<td>express the expectation that</td>
<td>lead Y to expect</td>
<td>expect</td>
<td></td>
</tr>
<tr>
<td>(226) fatigio</td>
<td>express boredom</td>
<td>bore Y; weary Y; tire Y</td>
<td>feel bored; tire of</td>
<td></td>
</tr>
<tr>
<td>(230) fisco</td>
<td>tax; levy tribute</td>
<td>—</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>(231) fissuro</td>
<td>crack (intr.)</td>
<td>—</td>
<td>crack Y</td>
<td></td>
</tr>
<tr>
<td>(233) flagello</td>
<td>whip; (beat); cane; flog; thrash; scourge</td>
<td>—</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>(237) fracto</td>
<td>break (intr.)</td>
<td>—</td>
<td>break Y; fracture Y</td>
<td></td>
</tr>
<tr>
<td>(239) frictio</td>
<td>rub Y; (polish Y)</td>
<td>—</td>
<td>cause friction between Y and Z (de Z)</td>
<td></td>
</tr>
<tr>
<td>(241) frustra</td>
<td>—</td>
<td>—</td>
<td>disappoint Y; be disappointed</td>
<td></td>
</tr>
<tr>
<td>(242) fugio</td>
<td>flee from (causo); run away from (causo)</td>
<td>—</td>
<td>chase Y; put Y to flight</td>
<td></td>
</tr>
<tr>
<td>(244) gameo</td>
<td>marry</td>
<td>—</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>(249) grado</td>
<td>walk</td>
<td>—</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>(250) grapho</td>
<td>write; inscribe; sign</td>
<td>—</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>(251) gratio</td>
<td>thank</td>
<td>make Y grateful</td>
<td>feel grateful; be grateful for (causo)</td>
<td></td>
</tr>
<tr>
<td>(252) gravito</td>
<td>fall; descend (under gravity); sink</td>
<td>tip Y over; make Y fall; spill Y; drop Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(253) gravo</td>
<td>emphasize Y; stress Y</td>
<td>—</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>(255) gyro</td>
<td>roll (intr.); spin (intr.); revolve (intr.); rotate (intr.)</td>
<td>rotate Y; spin Y; revolve Y; roll Y</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>(294) magico</td>
<td>acte</td>
<td>dicte</td>
<td>stimule</td>
<td>esthe</td>
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<tr>
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<tr>
<td>bewitch ; cast a spell over</td>
<td>repeat a spell</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

| (296) malo | sin : do evil | run down Z to Y \( (Y \text{ anti } Z) \); condemn Z to Y \( (Y \text{ anti } Z) \) | stir up trouble \( \text{intr.} \); tempt Y into evil | |

| (299) maturo | grow | | encourage the growth of Y; force Y \( \text{of plants} \) | |

| (301) merco | buy; purchase | | encourage the sales of Y | |

| (302) metodo | | state the method of \( (\text{de}) \) | | |

| (305) miro | | express surprise | astonish Y; amaze Y; surprise Y | be amazed at; be astonished by |

| (306) miso | | express hatred against \( (\text{anti}) \) | stir up hatred | hate; loathe; abhor |

| (307) mixo | mix ; blend | | mix Y with Z \( \text{syn } Z \); blend Y | |

| (308) mnemo | | recite \( \text{from memory} \) | remind Y | remember, recall |

| (309) monito | | advise Y; counsel Y; warn Y against \( (\text{anti}) \) | | |

| (310) mordo | bite; with duro \( \text{(as aux- il.)} \); chew; nibble | | make Y bite | |

| (313) musico | play; perform | | | |

<p>| (314) muto | alter ( \text{(intr.)} ); change ( \text{intr.} ) | | alter Y; change Y | |
| (257) helico | coil up | — | make Y coil; coil Y |
| (260) historo | — | narrate Z to Y (Y de Z); give an account of Z to Y (Y de Z) | &quot; |
| (265) impacto | strike; knock; (push) | — | make Y knock against (de) |
| (266) impero | — | order; command | feel impelled to; must |
| (268) inhibito | interfere with; thwart; frustrate | forbid | feel frustrated; be thwarted |
| (269) insure | insure Y (life or property) | — | — |
| (270) investo | invest (money) | — | encourage investment in (de) |
| (274) judico | decide | give a verdict for (pro), or against (anti); i.e. acquit or condemn | make Y decide to; make up one's mind to (tendo) |
| (276) lapso | slip; slide; glide; skate | — | make Y slip |
| (277) laudo | — | praise Z to Y (Y de Z); commend Z (de Z) | arouse approval; admire; approve of |
| (278) lavo | wash | — | — |
| (279) lecto | read Z to Y (Y ex Z); peruse Z (ex Z) | read Z aloud to Y (Y ex Z) | — |
| (284) libido | — | — | excite desire in Y; lust after (de); hunger for (de), etc. |
| (285) ligato | tie; ligate | — | — |
| (286) limito | — | qualify Z (de Z) | — |
| (289) logo | — | elucidate Z to Y (Y de Z) | enlighten; understand |</p>
<table>
<thead>
<tr>
<th>(315) mytho</th>
<th>—</th>
<th>romance</th>
<th>fire the imagination of Y</th>
<th>imagine; fantasy</th>
</tr>
</thead>
<tbody>
<tr>
<td>(316) narco</td>
<td>—</td>
<td>—</td>
<td>narcotize Y; drug Y; intoxicate Y</td>
<td>feel drugged</td>
</tr>
<tr>
<td>(319) necro</td>
<td>destroy Y; ruin Y; annihilate Y; demolish Y</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(320) negotio</td>
<td>transact; negotiate; do business</td>
<td>talk business</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(322) nocuo</td>
<td>harm; spoil; damage; <em>(hurt)</em></td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(324) nomo</td>
<td>—</td>
<td>theorize about <em>(de)</em></td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(326) nullo</td>
<td>receipt; annul; cancel; <em>rescind, repudiate</em></td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(330) offero</td>
<td>—</td>
<td>offer; make an offer to</td>
<td>get Y to Offer P to Q <em>(de P ad Q)</em></td>
<td>—</td>
</tr>
<tr>
<td>(332) oppresso</td>
<td>oppress, persecute</td>
<td>taunt Y</td>
<td>—</td>
<td>feel persecuted</td>
</tr>
<tr>
<td>(335) orno</td>
<td>ornament; decorate; embellish</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(337) osculo</td>
<td>kiss</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(339) oxidatio</td>
<td>—</td>
<td>—</td>
<td>oxidize Y</td>
<td>—</td>
</tr>
<tr>
<td>(340) paco</td>
<td>—</td>
<td>soothe Y <em>(verbally)</em></td>
<td>soothe Y; pacify Y; reconcile Y with Z <em>(de Z)</em></td>
<td>be at ease <em>(with)</em>; be contented <em>(with)</em></td>
</tr>
<tr>
<td>(346) pardo</td>
<td>—</td>
<td>express forgiveness; excuse Z to Y <em>(Y de Z)</em></td>
<td>—</td>
<td>forgive; pardon; condone; excuse</td>
</tr>
<tr>
<td>(348) pecunio</td>
<td>pay; spend</td>
<td>—</td>
<td>charge Y</td>
<td>—</td>
</tr>
<tr>
<td>(350) penito</td>
<td>—</td>
<td>express regret</td>
<td>make Y sorry; make Y regret</td>
<td>regret; repent; be sorry for <em>(causo)</em></td>
</tr>
<tr>
<td></td>
<td>acte</td>
<td>dicte</td>
<td>stimule</td>
<td>esthe</td>
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<td>--------------------------------</td>
</tr>
<tr>
<td>(351)</td>
<td><strong>peno</strong></td>
<td>punish Y ; pay Y back</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(353)</td>
<td><strong>phago</strong></td>
<td>eat Y ; feed <em>(intr.)</em></td>
<td>—</td>
<td>feed Y on <em>(per)</em></td>
</tr>
<tr>
<td>(355)</td>
<td><strong>philo</strong></td>
<td>—</td>
<td>—</td>
<td>make love to Y ; woo Y</td>
</tr>
<tr>
<td>(356)</td>
<td><strong>phobo</strong></td>
<td>show fear</td>
<td>express one's fears v</td>
<td>terrify Y ; frighten Y ; make Y afraid</td>
</tr>
<tr>
<td>(357)</td>
<td><strong>phono</strong></td>
<td>—</td>
<td>—</td>
<td>sound Y ; ring Y</td>
</tr>
<tr>
<td>(358)</td>
<td><strong>phoro</strong></td>
<td>carry ; transport ; take (with one) ; (bear)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(360)</td>
<td><strong>phreno</strong></td>
<td>—</td>
<td>persuade Y ; reason with Y</td>
<td>—</td>
</tr>
<tr>
<td>(363)</td>
<td><strong>piano</strong></td>
<td>plan ; design</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(366)</td>
<td><strong>plico</strong></td>
<td>fold <em>(intr.)</em></td>
<td>—</td>
<td>fold Y,</td>
</tr>
<tr>
<td>(368)</td>
<td><strong>pluvio</strong></td>
<td>rain</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(369)</td>
<td><strong>pneumo</strong></td>
<td>breathe ; respire ; ininhale ; <em>extra-</em> exhale</td>
<td>—</td>
<td>apply artificial respiration ; make one lose one's breath</td>
</tr>
<tr>
<td>(370)</td>
<td><strong>praxo</strong></td>
<td>practise ; drill</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(375)</td>
<td><strong>promisso</strong></td>
<td>—</td>
<td>promise Y ; undertake to <em>(tendo)</em></td>
<td>make Y promise</td>
</tr>
<tr>
<td>(376)</td>
<td><strong>proposo</strong></td>
<td>—</td>
<td>propose ; suggest</td>
<td>—</td>
</tr>
<tr>
<td>(378)</td>
<td><strong>protesto</strong></td>
<td>—</td>
<td>protest <em>about</em> <em>(de)</em> ; complain <em>about</em> <em>(de)</em> ; lament <em>about</em> <em>(de)</em></td>
<td>make Y complain</td>
</tr>
<tr>
<td>(379)</td>
<td><strong>pseudo</strong></td>
<td>deceive Y ; decoy Y</td>
<td>lie to Y ; deceive Y</td>
<td>—</td>
</tr>
<tr>
<td>(380)</td>
<td><strong>perforato</strong></td>
<td>perforate ; puncture ; drills make a hole in</td>
<td>—</td>
<td>—</td>
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<tr>
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</tr>
<tr>
<td>(381) <strong>pudo</strong></td>
<td>—</td>
<td>express horror at <strong>(causo)</strong></td>
<td>horrify Y; disgust Y</td>
<td>be horrified by <strong>(causo)</strong>; feel disgusted at <strong>(causo)</strong></td>
</tr>
<tr>
<td>(384) <strong>pyro</strong></td>
<td>burn (<strong>intr.</strong>.)</td>
<td>—</td>
<td>light Y; burn Y; set on fire</td>
<td>—</td>
</tr>
<tr>
<td>(385) <strong>qualito</strong></td>
<td>—</td>
<td>define</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(387) <strong>rapo</strong></td>
<td>seize; grasp; (<strong>catch</strong>); snatch</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(388) <strong>raso</strong></td>
<td>scratch; scrape</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(391) <strong>reflecto</strong></td>
<td>reflect; glisten; glitter; echo</td>
<td>—</td>
<td>polish Y; burnish Y; make Y shiny; (re-) echo to</td>
<td>—</td>
</tr>
<tr>
<td>(393) <strong>reparo</strong></td>
<td>mend; repair; remedy; heal</td>
<td>—</td>
<td>heal (<strong>ir.</strong>); cure</td>
<td>feel better</td>
</tr>
<tr>
<td>(396) <strong>revero</strong></td>
<td>—</td>
<td>express reverence for (<strong>de</strong>) worship Y (orally)</td>
<td>—</td>
<td>revere; respect; worship (silent)</td>
</tr>
<tr>
<td>(397) <strong>rheo</strong></td>
<td>flow; stream</td>
<td>—</td>
<td>switch on the current (turn on the light)</td>
<td>—</td>
</tr>
<tr>
<td>(400) <strong>riso</strong></td>
<td>laugh <strong>at</strong> (<strong>de</strong>)</td>
<td>express amusement</td>
<td>make Y laugh</td>
<td>be amused at</td>
</tr>
<tr>
<td>(402) <strong>sado</strong></td>
<td>be cruel; torment Y</td>
<td>taunt Y</td>
<td>encourage cruelty</td>
<td>—</td>
</tr>
<tr>
<td>(403) <strong>salto</strong></td>
<td>jump; leap</td>
<td>—</td>
<td>make Y jump; jerk Y off (<strong>apo</strong>)</td>
<td>—</td>
</tr>
<tr>
<td>(404) <strong>saluto</strong></td>
<td>salute Y</td>
<td>greet Y;</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(405) <strong>sapio</strong></td>
<td>—</td>
<td>inform Y</td>
<td>—</td>
<td>know Y; be acquainted with Y</td>
</tr>
<tr>
<td>(408) <strong>schizo</strong></td>
<td>split; tear; cleave; divide</td>
<td>—</td>
<td>split Y; tear Y; cleave Y; divide Y</td>
<td>—</td>
</tr>
<tr>
<td>(409) <strong>scholo</strong></td>
<td>teach Y; instruct Y</td>
<td>expound Z to Y (<strong>Y de Z</strong>)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(415) scopo</td>
<td>acte</td>
<td>dicte</td>
<td>stimule</td>
<td>esthe</td>
</tr>
<tr>
<td>------------</td>
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<td>-------</td>
</tr>
<tr>
<td>search for Y; look for Y (de Y)</td>
<td>—</td>
<td>invite curiosity</td>
<td>—</td>
<td></td>
</tr>
</tbody>
</table>

| (416) severe | — | — | — |
| discipline Y; with no = indulge Y | reprimand Y | — | — |

| (417) significo | — | translate Y; interpret Y; give the meaning of Y; explain Y | — | — |

| (418) siphono | — | — | — |
| suck Y up; siphon Y | — | — | — |

| (419) societo | — | — | — |
| organize Y | — | encourage the organization of Y | — |

| (420) solemnno | — | — | — |
| be dignified; be pompous | speak earnestly to Y | — | — |

| (423) soporo | — | — | — |
| — | put Y to sleep | feel sleepy |

| (424) specio | — | — | — |
| — | give Y an example of (de) | — |

| (425) sporto | — | — | — |
| play; frolic; gambol | say Z in fun to Y (de Z) | make Y gay | feel gay; feel merry |

| (426) stalagmo | — | — | — |
| drop (intr.); drip (intr.); trickle | — | make Y drip | — |

| (432) sympto | — | — | — |
| — | give Y a hint; hint to Y | — | have a hunch |

| (434) tensio | — | — | — |
| stretch (intr.); extend | — | stretch Y; extend Y | — |

| (435) testimonio | — | — | — |
| — | give evidence to Y; make a statement to Y (legal) | — | — |

| (438) tolero | — | — | — |
| forbear with Y; put up with Y; suffer Y | — | encourage Y to be patient | be tolerant about (de) |

<p>| (439) traumo | — | — | — |
| — | — | shock | be shocked at (causo) |
| (442) tropo | trim (<em>intr.</em>) ; twist (<em>intr.</em>) | — | make Y turn ; twist Y; turn Y | — |
| (443) turbo | shake; quake | — | shake Y | — |
| (444) typo | print | — | — | — |
| (447) unio | meet; forgather | — | assemble ; call a meeting | — |
| (451) vendo | sell | — | stimulate the sales of | — |
| (452) verito | — | tell Y the truth about (<em>de</em>) | — | — |
| (453) vibro | vibrate ; alternate | — | make Y vibrate | — |
| (455) violo | attack Y | attack Y (orally) | provoke an attack by Y | — |
| (457) visito | visit Y ; pay a call on Y | — | — | — |
| (458) vivo | wake up (<em>intr.</em>) ; awaken (<em>intr.</em>) | — | wake Y up ; awaken Y; interest Y in (<em>de</em>) | be awake; be alert (to) <em>de</em> ; be conscious (of) <em>de</em> |
| (459) voco | cry out to Y ; call to Y | — | — | — |
| (462) zygo | join Y (<em>de Y</em>) ; connect with Y (<em>de Y</em>) ; unite with Y (<em>de Y</em>) ; fuse with Y (<em>de Y</em>) | — | join Y with Z (<em>de Z</em>) ; connect Y with Z (<em>de Z</em>) ; fuse Y with Z (<em>de Z</em>) ; unite Y with Z (<em>de Z</em>) | — |
| (861) cambio | exchange Y for Z (<em>Y de Z</em>) ; interchange Y and Z (<em>Y de Z</em>) | — | — | — |
| (862) charito | — | express sympathy for (<em>de</em>) | — | pity ; sympathize with |
| (863) cido | kill; murder ; slaughter | — | — | — |</p>
<table>
<thead>
<tr>
<th></th>
<th>acte</th>
<th>dicte</th>
<th>stimule</th>
<th>esthe</th>
</tr>
</thead>
<tbody>
<tr>
<td>(865) <strong>diffusio</strong></td>
<td>diffuse ; spread ; pervade</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(866) <strong>flexio</strong></td>
<td>bend (intr.)</td>
<td>—</td>
<td>bend (tr.) ; refract</td>
<td>—</td>
</tr>
<tr>
<td>(869) <strong>massago</strong></td>
<td>stroke ; massage</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(870) <strong>necto</strong></td>
<td>swim</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(871) <strong>perplexo</strong></td>
<td>—</td>
<td>express bewilderment</td>
<td>bewilder ; perplex</td>
<td>be perplexed by (de)</td>
</tr>
<tr>
<td>(873) <strong>utilo</strong></td>
<td>use (up) ; employ</td>
<td>—</td>
<td>—</td>
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</tr>
</tbody>
</table>
CHAPTER IX
CLASS VIII: SUBSTANTIVES (385)

No one who has given any thought to semantic issues would be so foolish as to assert that there is a clear-cut division between abstract words and names for things, or between names for things and names for classes of things. With that reservation we can say that amplifiers are names for abstracts and that substantives are names for things or persons. If our list of the former admittedly contains collectives which have equal title to rank as concrete entities alongside many items in the list which follows, a sufficient justification is that they are specially liable to enter into constructions for which some languages have single verbs. Existing international names for many concrete entities are suitable for use as they stand, and it will not be necessary to enter them as numbered items in our list of essential substantives. Those mentioned in this chapter appear in a separate table at the end of the Basic word-list on p. 255.

In conformity with the principle stated on p. 17, Interglossa makes full use of generic substantives which sufficiently label a thing or person in a given context without recourse to compound formation or use of a qualifying epithet. Thus vecti (782) for a lever, means any sort of lever, including a piano key, bicycle pedal, starting-handle of automobile, etc. We need to use the qualifier dactyli in u dactyli vecti when, and only when, the context does not make it sufficiently clear that the type of lever under discussion is a piano key. We need scarcely ever do so in a sentence or paragraph containing the word piano. This instruction applies mutatis mutandis to all qualified substantives listed below.

(a) Parts of the Body (68) : From the international vocabulary of comparative anatomy and medicine, we can adopt without change:

<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>anus</td>
<td>anus, vent</td>
</tr>
<tr>
<td>artery</td>
<td>artery</td>
</tr>
<tr>
<td>branchia</td>
<td>gills</td>
</tr>
<tr>
<td>carina</td>
<td>keel</td>
</tr>
<tr>
<td>coryza</td>
<td>cold</td>
</tr>
<tr>
<td>chela</td>
<td>pincers</td>
</tr>
<tr>
<td>dyspepsia</td>
<td>indigestion</td>
</tr>
<tr>
<td>embryo</td>
<td>embryo</td>
</tr>
<tr>
<td>mamma</td>
<td>breast</td>
</tr>
<tr>
<td>nausea</td>
<td>(sea) sickness</td>
</tr>
<tr>
<td>pterygia</td>
<td>fins</td>
</tr>
<tr>
<td>pyrexia</td>
<td>fever</td>
</tr>
<tr>
<td>salvia</td>
<td>spittle</td>
</tr>
<tr>
<td>sex</td>
<td>sex</td>
</tr>
<tr>
<td>trachea</td>
<td>windpipe</td>
</tr>
<tr>
<td>vena</td>
<td>vein</td>
</tr>
<tr>
<td>vertebra</td>
<td>vertebra</td>
</tr>
<tr>
<td>viscera</td>
<td>entails, guts</td>
</tr>
</tbody>
</table>
Nearly all the numbered items below are familiar to anyone who has a little knowledge of hygiene or school biology:

(483) abdomini \(\rightarrow\) abdomen
(484) arthri \(\rightarrow\) joint
(485) brachi \(\rightarrow\) arm
(486) bucca \(\rightarrow\) cheek
(487) calca \(\rightarrow\) heel (abbreviated from calcaneum, the heel-bone)

(488) cantha \(\rightarrow\) eyelid
(489) cardia \(\rightarrow\) heart
(490) carpi \(\rightarrow\) wrist
(491) cephalı \(\rightarrow\) head; apex; summit
(492) cerebra \(\rightarrow\) brain; intellect

\(u\) cerebra ergo = brainwork

(493) cervica \(\rightarrow\) neck; throat; isthmus
(494) chiri \(\rightarrow\) hand

\(u\) chiri-re — handle

plu chiri arthri = knuckles

(495) chondra \(\rightarrow\) cartilage; gristle
(496) costa \(\rightarrow\) rib; chop
(497) crania \(\rightarrow\) skull
(498) cysti \(\rightarrow\) bladder
(499) cyti \(\rightarrow\) cell (of tissue or honeycomb)
(500) dactyli \(\rightarrow\) digit, i.e. finger or toe; peninsula

Where context insists:

chiri dactyli = finger
pedi dactyli = toe

For thumb we have minor dactyli, or the international term hallux,

(501) denti \(\rightarrow\) tooth (of jaw or wheel), dental
(502) dermi \(\rightarrow\) skin; leather
(503) entera \(\rightarrow\) gut; alimentary canal
(504) facia \(\rightarrow\) face
(505) feci or copra \(\rightarrow\) faeces; excrement
(506) gastri \(\rightarrow\) stomach
(507) glandi  gland
(508) glena  socket (of skeleton or device)
(509) glossa  tongue; language
(510) glutea or pygea  buttocks; rump
(511) gnatha  jaw, beak

un hypo gnatha = chin

(512) haema  blood
(513) hepa  liver
(514) kerati or cornua  horn
(515) labi  lip(s)
(516) lacrima  tear(s)
(517) lacti  milk
(518) lana or eri  wool
(519) lepidi  scale; scaly
(520) lipi or stea  fat
(521) lophi  comb; crest; ridge
(522) nari  nostrils
(523) nasa  nose; cape (geogr.)
(524) nephri or renia  kidney
(525) neura  nerve
(526) oculi  eye, optic
(527) oesophagi  gullet
(528) ora or stoma  mouth; opening; orifice; aperture
(529) ostea  bone
(530) ostraca or concha  shell (of mollusc, egg, nut)
(531) oti  ear
(532) ova  egg

ova morpho = oval

(533) pedi  foot
u pedi-re = step (of ladder or staircase); rung
(534) pelvi or coxa  hip
(535) pinna  feather
(536) poda  leg, limb (of body, chair, table)
(537) pteri  wing
(538) pulmoni  lungs
(539) sarca or mya  muscle
(540) scapa  shoulder
(541) soma or corpora  body
(542) sndori  sweat
(543) tarsi  ankle
(544) thela or villi  nozzle; nipple; promontory
(545) thoraci  chest
(546) tricha or capilla  hair; fur
plu gnatha tricha = beard
plu labi tricha = moustache
plu soma tricha = fur; pelt
plu cantha tricha = eyelashes
plu oculi tricha = eyebrow
(547) unguia  nail; hoof; claw
(548) ura or cauda  tail

(b) Zoological and Botanical Terms (80)

Since there is an existing international vocabulary of zoological and botanical names, it is difficult to know which words to adapt (see p. 266) and which to accept, as they stand. We have to be guided by: (a) human interest of the item itself; (b) degree of correspondence between technical terms and categories of everyday speech; (c) geographical distribution of the type itself. The type may be actually specific, e.g. the horse (Equus caballus) or the ass (Equus asinus); and if we followed international practice this would involve recourse to the binomial epithet. More often a common name cuts across species, genera, or even classes. There is no need to add to our list items of the existing international vocabulary of Horticulture. Such words as rosa, viola, azalea, are on the lips of people wherever commercial distribution of horticultural products goes on; and many, are, like the foregoing, compatible with the phonetic pattern of Interglossa without change. If they are not, we can adapt them to it by applying the rules on p. 239, e.g. Lilium becomes lilia (plural form); Gladiolus becomes gladioli; Rhododendron becomes rhpdo-dendra, and Meconopsis becomes meconopsi. Anyone who wishes to write
poetry in *Interglossa* will find enough of them in a seed-catalogue. The following are internationally current in the form given, and need not appear as numbered items in our list of essential words:

<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>acantha</td>
<td>spine; prickle; thorn</td>
</tr>
<tr>
<td>alfalfa</td>
<td>lucerne</td>
</tr>
<tr>
<td>alga</td>
<td>seaweed</td>
</tr>
<tr>
<td>anguilla</td>
<td>eel</td>
</tr>
<tr>
<td>anura</td>
<td>frog; toad</td>
</tr>
<tr>
<td>araneida</td>
<td>spider</td>
</tr>
<tr>
<td>avena</td>
<td>oats</td>
</tr>
<tr>
<td>bacteria</td>
<td>bacteria</td>
</tr>
<tr>
<td>banana</td>
<td>banana</td>
</tr>
<tr>
<td>betula</td>
<td>birch</td>
</tr>
<tr>
<td>brassica</td>
<td>cabbage</td>
</tr>
<tr>
<td>capra</td>
<td>goat</td>
</tr>
<tr>
<td>cetacea</td>
<td>whale; dolphin</td>
</tr>
<tr>
<td>chelonia</td>
<td>turtle; tortoise</td>
</tr>
<tr>
<td>coleoptera</td>
<td>beetle</td>
</tr>
<tr>
<td>corolla</td>
<td>petals</td>
</tr>
<tr>
<td>crocodilia</td>
<td>crocodile; alligator</td>
</tr>
<tr>
<td>picea</td>
<td>fir</td>
</tr>
<tr>
<td>porifera</td>
<td>sponges</td>
</tr>
<tr>
<td>protista</td>
<td>micro-organisms</td>
</tr>
<tr>
<td>reptilia</td>
<td>reptiles</td>
</tr>
<tr>
<td>acarina</td>
<td>ticks</td>
</tr>
<tr>
<td>alfalfa</td>
<td>lucerne</td>
</tr>
<tr>
<td>alga</td>
<td>seaweed</td>
</tr>
<tr>
<td>anguilla</td>
<td>eel</td>
</tr>
<tr>
<td>anura</td>
<td>frog; toad</td>
</tr>
<tr>
<td>araneida</td>
<td>spider</td>
</tr>
<tr>
<td>avena</td>
<td>oats</td>
</tr>
<tr>
<td>bacteria</td>
<td>bacteria</td>
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<tr>
<td>banana</td>
<td>banana</td>
</tr>
<tr>
<td>betula</td>
<td>birch</td>
</tr>
<tr>
<td>brassica</td>
<td>cabbage</td>
</tr>
<tr>
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<tr>
<td>porifera</td>
<td>sponges</td>
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<tr>
<td>protista</td>
<td>micro-organisms</td>
</tr>
<tr>
<td>reptilia</td>
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</tr>
<tr>
<td>acarina</td>
<td>ticks</td>
</tr>
<tr>
<td>alfalfa</td>
<td>lucerne</td>
</tr>
<tr>
<td>alga</td>
<td>seaweed</td>
</tr>
<tr>
<td>anguilla</td>
<td>eel</td>
</tr>
<tr>
<td>anura</td>
<td>frog; toad</td>
</tr>
<tr>
<td>araneida</td>
<td>spider</td>
</tr>
<tr>
<td>avena</td>
<td>oats</td>
</tr>
<tr>
<td>bacteria</td>
<td>bacteria</td>
</tr>
<tr>
<td>banana</td>
<td>banana</td>
</tr>
<tr>
<td>betula</td>
<td>birch</td>
</tr>
<tr>
<td>brassica</td>
<td>cabbage</td>
</tr>
<tr>
<td>capra</td>
<td>goat</td>
</tr>
<tr>
<td>cetacea</td>
<td>whale; dolphin</td>
</tr>
<tr>
<td>chelonia</td>
<td>turtle; tortoise</td>
</tr>
<tr>
<td>coleoptera</td>
<td>beetle</td>
</tr>
<tr>
<td>corolla</td>
<td>petals</td>
</tr>
<tr>
<td>crocodilia</td>
<td>crocodile; alligator</td>
</tr>
<tr>
<td>picea</td>
<td>fir</td>
</tr>
<tr>
<td>porifera</td>
<td>sponges</td>
</tr>
<tr>
<td>protista</td>
<td>micro-organisms</td>
</tr>
<tr>
<td>reptilia</td>
<td>reptiles</td>
</tr>
</tbody>
</table>

With these current international words at our disposal the following will suffice for everyday use:

(551) **acantha** or **echini**

(552) **amygda**

(553) **ana**

(554) **anseri**

(555) **api**

(556) **asini**

(557) **avi**

(558) **bovi**

244
<table>
<thead>
<tr>
<th>Term</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>un an bovi</td>
<td>bull</td>
</tr>
<tr>
<td>u fe bovi</td>
<td>cow</td>
</tr>
<tr>
<td>un infanti bovi</td>
<td>calf (835); veal</td>
</tr>
<tr>
<td>(559) brya</td>
<td>moss</td>
</tr>
<tr>
<td>(560) bulba</td>
<td>bulb (of plant or lamp)</td>
</tr>
<tr>
<td>(561) cameli</td>
<td>camel</td>
</tr>
<tr>
<td>(562) canabi</td>
<td>hemp</td>
</tr>
<tr>
<td>(563) canceri</td>
<td>crab</td>
</tr>
<tr>
<td>(564) cani</td>
<td>dog</td>
</tr>
<tr>
<td>(565) cari</td>
<td>shrimp; prawn</td>
</tr>
<tr>
<td>(566) carpa</td>
<td>fruit</td>
</tr>
<tr>
<td>u sclero carpa</td>
<td>nut</td>
</tr>
<tr>
<td>(567) caula</td>
<td>stalk; stem</td>
</tr>
<tr>
<td>(568) cervi</td>
<td>deer</td>
</tr>
<tr>
<td>(569) chyma</td>
<td>juice</td>
</tr>
<tr>
<td>(570) citra</td>
<td>lemon; citron</td>
</tr>
<tr>
<td>(571) cochlea</td>
<td>snail</td>
</tr>
<tr>
<td>(572) cocoa</td>
<td>coconut; coco palm</td>
</tr>
<tr>
<td>(573) coniferi</td>
<td>conifers; pines, etc.</td>
</tr>
<tr>
<td>(574) cucurbi</td>
<td>squashes; cucumbers</td>
</tr>
<tr>
<td>(575) cygni</td>
<td>swan</td>
</tr>
<tr>
<td>(576) dendra</td>
<td>tree; wood; timber</td>
</tr>
<tr>
<td>micro dendra</td>
<td>shrub</td>
</tr>
<tr>
<td>(577) elepha</td>
<td>elephant</td>
</tr>
<tr>
<td>(578) equi</td>
<td>horse</td>
</tr>
<tr>
<td>(579) faba</td>
<td>bean</td>
</tr>
<tr>
<td>(580) feli</td>
<td>cat</td>
</tr>
<tr>
<td>(581) filici</td>
<td>fern</td>
</tr>
<tr>
<td>(582) flora</td>
<td>flower; blossom</td>
</tr>
<tr>
<td>(583) formici</td>
<td>ant</td>
</tr>
<tr>
<td>(584) galli</td>
<td>domestic fowl</td>
</tr>
<tr>
<td>un an galli</td>
<td>cock</td>
</tr>
<tr>
<td>u fe galli</td>
<td>hen</td>
</tr>
<tr>
<td>un infanti galli</td>
<td>chick (835)</td>
</tr>
</tbody>
</table>
(585) gluma  
husk; bran; glume
(586) gossypi  
cotton
(587) gramini  
grass

u desicco gramini = hay
plu phago gramini = cereals

(588) harengi  
herring
(589) homari  
lobster
(590) homini  
human being; (plur.)
mankind; Man; men and women

(591) hordea  
barley
(592) latici  
latex; (india)rubber
(593) legumi  
legumes
(594) lepi  
rabbit; hare
(595) lina  
flax
(596) lupi  
wolf
(597) muri  
rats; mice

mega muri = rat
micro muri = mouse

(598) orangi  
orange
(599) ovi  
sheep; mutton

un an ovi = ram
u fe ovi = ewe
un infanti ovi = lamb (835)

(600) panica  
millet
(601) persica  
peach
(602) phoeni  
date
(603) phylla  
leaf; blade
(604) phyta  
plant; vegetable
(605) pisa  
pea
(606) pisci  
fish
(607) pomi  
apple
(608) potati  
potato
(609) pruni  
plum

u desicco pruni = prune
(610) pyri  pear
(611) rami  branch
(612) rhabdi  stickf/staff
(613) rhiza  root
(614) salmi  salmon
(615) sardini  sardine
(616) secala  rye
(617) selachi  shark
(618) simi ape;  monkey
(619) sperma  seed
(620) suberi  cork
(621) sui  pig; pork; bacon; ham

un an sui = hog
u fe sui = sow

(622) syca or dici  fig¹
(623) tabaca or nicoti  tobacco
(624) tomati  tomato
(625) tritica  wheat
(626) vermi or helminthi  worm
(627) vespi  wasp; hornet
(628) viti  grape; vine

u desicco viti = currant; raisin

(629) vulpi  fox
(630) zoa  animal; beast

(c) Geographical Names (38)
(631) agri  field; meadow

un agri ergo = agriculture
un agri-lo = farm

(632) alluvia  clay
(633) astra  star
(634) asyla  harbour; haven; sanctuary

¹ Fici based on the genus Ficus should undoubtedly have preference over syca.
(635) baia  bay
(636) canali  channel; strait
(637) carta  map; diagram; chart,
    u stereo carta = solid model
    u domi carta = house plan
(638) dim a or meteori  climate; weather
(639) continenti  continent
(640) cosmi  universe
(641) deserta  desert
(642) detriti  mud
(643) farina  dust; powder
    u tritica farina = wheat flour
    u zea farina = maize, meal
    un an farina  = pollen
(644) fonta  spring; fountain
(645) geo  the earth
(646) heli  sun
    un heli-radio = a sunbeam
    un heli photo = sunlight; sunshine
    un heli lavo  = a sunbath
(647) horti  park, garden
(648) limni  lake
    micro limni = pond; pool
(649) luna  moon; satellite
    u cephal-luna = halo
    u luna photo = moonlight
    hemi luna  = half moon
    holo luna  = full moon
    un heli luna  = planet
(650) mari  sea
(651) mina  mine
(652) monti  mountain
(653) mucii  slime
(654) nesia  island
(655) nebuli fog; mist
(656) nephela cloud
(657) oceani ocean
(658) phrea well; pit
(659) potami river; stream

u ge facte potami = canal

(660) rura countryside

u rura prospecto = scenery, landscape

(661) sili of psamma sand
(662) spectra rainbow; spectrum
(663) terra land; soil; ground

in terra = underground; subterranean

(664) tunneli or glypha tunnel
(665) urani sky; heaven
(666) urba city; town
(667) valli valley; dale; groove; dent
(668) via way; road; street;
thoroughfare; track; path; trajectory

u via-pe = guide; pilot; conductor
u pedi via = the pavement
u dendra via — an avenue
u meso via = compromise (the middle way)
(un) extra meso via = fanatical; fanaticism
habe u via ad = have access to
kine epi erro via = take the wrong road;
lose one's way

(d) Food, Clothes and Furniture (34)
Articles of food, clothes and furniture vary greatly in different
countries; and it is permissible (p. 22) to use local names for
specifically local ones, e.g. frankfurter, cognac, omelette. We
can form many essential terms by compound formation with -ve,
-mo, -zo (pp. 101-105). In addition the following are useful:
(669) ampulla or asci flask; bottle; flagon
(670) amyla           starch
(671) bursa or sacci  bag; sack

u valuta bursa = purse (859)

(672) butyri           butter
(673) caca              cocoa
(674) cafa              coffee
(675) calyci            cup
(676) campani           bell; alarum
(677) casea             cheese
(678) choani            collar
(679) clinica           bed; couch

un avi clinica = bird's nest

(680) confecti         jam
(681) corona            drown; wreath; coronet; diadem
(682) crea or carni     flesh; meat

crea chyma = gravy

(683) geli             jelly
(684) marsupia         pocket

u liquo-marsupia = a blister

(685) mitra            hat, cap
(686) olea             oil
(687) pani             bread, loaf
(688) placa            cake, bun, biscuit

micro placa = tablet

cushion; pillow

(689) pulvini          u soma pulvini = bed mattress
(690) sacari           sugar

un api sacari = honey
plu sacari-re = sweets

(691) sedi             chair, seat, bench

u regi sedi = throne (849)
plu sedi-pe = congregation

(692) spiriti          spirits; strong drink
(693) strata           shelf
<table>
<thead>
<tr>
<th>Number</th>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>694</td>
<td>supa</td>
<td>soup; broth</td>
</tr>
<tr>
<td>695</td>
<td>tapea</td>
<td>carpet; mat</td>
</tr>
<tr>
<td>696</td>
<td>tea</td>
<td>tea</td>
</tr>
<tr>
<td>697</td>
<td>testa</td>
<td>coat</td>
</tr>
<tr>
<td></td>
<td></td>
<td>un extra testa = overcoat</td>
</tr>
<tr>
<td></td>
<td></td>
<td>un in testa = waistcoat; (Amer.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>u pluvio testa = raincoat</td>
</tr>
<tr>
<td>698</td>
<td>theca</td>
<td>box; chest; (plural) baggage</td>
</tr>
<tr>
<td></td>
<td></td>
<td>u liquo-theca = tank</td>
</tr>
<tr>
<td></td>
<td></td>
<td>u tracte-theca = chest of drawers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>u vesto theca = wardrobe</td>
</tr>
<tr>
<td>699</td>
<td>toga or pallia</td>
<td>mantle; cloak</td>
</tr>
<tr>
<td>700</td>
<td>trapeza</td>
<td>table</td>
</tr>
<tr>
<td></td>
<td></td>
<td>un hagio trapeza = altar</td>
</tr>
<tr>
<td>701</td>
<td>tunica</td>
<td>frock, smock, dress (woman's)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>un in tunica = chemise; undershirt; (vest) (Brit.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>un hypo tunica = skirt</td>
</tr>
<tr>
<td></td>
<td></td>
<td>u supero tunica = shirt ; blouse</td>
</tr>
<tr>
<td>702</td>
<td>vini</td>
<td>wine</td>
</tr>
<tr>
<td>(e) Architectural Terms; Shapes and Units (30)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>In this context we have two current international words our disposal:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>area (= epi-metro) area; surface</td>
</tr>
<tr>
<td></td>
<td></td>
<td>inertia sluggishness ; inertia</td>
</tr>
<tr>
<td>703</td>
<td>amorphi</td>
<td>lump; clod</td>
</tr>
<tr>
<td>704</td>
<td>atria</td>
<td>court (enclosed yard)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>un in-atria = hall (of house)</td>
</tr>
<tr>
<td>705</td>
<td>balconi</td>
<td>balcony; gallery</td>
</tr>
<tr>
<td></td>
<td></td>
<td>u terra balconi = verandah; stoep</td>
</tr>
<tr>
<td>706</td>
<td>centra</td>
<td>point; speck</td>
</tr>
<tr>
<td></td>
<td></td>
<td>u meso centra = centre</td>
</tr>
</tbody>
</table>
u tendo centra = focus

(707) cera brick; block

u plato cera = tile; slate (364)

plu via cera = paving-stones (668)

(708) columni pillar; column; pole

(709) coni cone (geom); funnel (for filling)

(710) cruci cross

u cruci ligato = knot (285)

(711) cuba cube; third power

(712) cycli circle

(713) cylindri cylinder

(714) fenestra window

(715) fossa ditch; drain

un in terra fossa = ditch

(716) grami gram

(717) lampa lamp

u plasti lampa = candle

u lampa umbro-re = lampshade

(718) litri litre

(719) metri metre

(720) mura or septa wall; partition

u columni mura = railing

u chiri mura — handrail; banister

(721) ponti bridge

(722) porta door; gate; lid

u fenestra porta = french window

(723) prisma prism

(724) prosceni stage

(725) pyrami pyramid

(726) quadra square

(727) recessi recess

(728) scala steps; ladder; stairs

(729) skeleta framework; frame; skeleton; scaffolding
(730) *sphera*  
*sphere; ball; globe*

(731) *tecti*  
*roof*

- *u coni tecti* — *spire*
- *u hemi sphera tecti* = *dome*
- *un ora tecti* = *palate*

(732) *tubi*  
*pipe; tube*

- *u fumo tubi* ~ *funnel, chimney*
- *u nicoti tubi* — *tobacco pipe*

*(f) Instruments* *(51)*

The following are internationally current as they stand:

- **camera**  
  *camera*

  - *u camera-pe* = *photographer*

- **lens**  
  *lens*

- **libra**  
  *scales, balance (zodiacal-constellation)*

- **piano**  
  *piano*

  - *u piano-pe* = *pianist*

- **violin**  
  *violin*

- **acu**  
  *nail; pin*

  - *un helico-acu* = *screw*

- **ara**  
  *plough*

- **artilleri**  
  *gun; rifle; cannon*

*Note.* — Artilleri is the *generic* term for explosive weapons. Internationally current terms for nearly all types now in use are to hand.

- **axi**  
  *shaft*

- **baci**  
  *bar; rod*

  - *u cleidi-baci* = *bolt (of door)*

- **blada**  
  *knife; dagger*

- **bomba**  
  *shell; bomb*

  - *u stato bomba* = *mine*

- **cardo**  
  *hinge*

- **catena**  
  *chain*

- **clavi**  
  *key (of door)*

- **cleidi**  
  *lock (see p. 31)???
(744) colea
  sheath
  u coito colea = condom
  u cephalo-colea = hood

(745) copa
  oar; paddle

(746) copula
  link

(747) coryna
  club; bat

(748) cteni or pectini
  comb; rake

(749) dentili or trepana
  saw

(750) disca
  disc; plate

(751) elastici
  spring
  elastico poto = elasticity

(752) falci
  hook
  u secto falci = a sickle

(753) furca
  fork (table or garden)

(754) gladi
  sword

(755) helica
  propeller; electric fan

(756) inci
  anvil

(757) lamina
  sheet; plank; board; page; layer
  u picto lamina = drawing-board
  u creta lamina = blackboard

(758) lancea
  lance

(759) lyra
  harp

(760) machina
  engine

(761) mallea
  hammer

(762) mimi
  doll, effigy

(763) missili
  missile; bullet; cannon-ball

(764) navi
  ship

  un aero nayi = airship; aeroplane
  u navi-lo = docks
  navi-fa = fleet

---

1 Balloons and dirigibles are light airships (no-masso aero navi) without a propeller (minus helica) or with a propeller (syn helica).
occlu: burr (Amer.) ; nut (Brit.)
peleci: axe; chopper
penna: pen

carba penna = a pencil

pista: piston
re: net, network; sieve
rhabdi re = basket(work)

rota: wheel
vapor rota = a turbine
bi-rota = a bicycle

sagitta: arrow; dart
sagitta-ru = a bow
sagitta-va = quiver

scuta or aspi: shield; mask
facia scuta = mask

seta: brush; broom
signa: flag; ensign; banner
spatula: spoon; spade
sphena: wedge; wad
stapi: stirrup
syringi: flute; whistle; recorder; pipe
taxi: automobile; motor-car
tympana: drum
vagoni: vehicle; carriage; car
via vagoni = tramcar; street-car

vecti: lever; (pedal); (piano key)
dactyl vecti = a key (of piano)
pedi vecti — pedal

vela, sail
vela = kite

w. and territories
In accordance with the rule on p. 239, *Interglossa* adopts -a (plural) form for any internationally current term which ends with -um, e.g. *zinca* (zinc). This covers nearly all the metals in the periodic table, and we need therefore list only the more common ones in what follows. The three next items are of sufficiently international rank to list without number in accordance with previous usage:

- alkali
- arnica
- silica

(784) acidi
(785) anthraci
(786) argenta
(787) aura
(788) carba
(789) cigara
(790) cigaretta
(791) colli
(792) creta
(793) crystalli
(794) cupra
(795) ferra

*u sclero ferra* = steel

(796) gasi
(797) hali
(798) margara
(799) metali

*u metali mixo* — alloy

(800) papyri
(801) petrolea
(802) plasti

*un adhesio plasti* = sealing-wax
un api plastī = beeswax

(803) plumba = lead
(804) saponi = soap
(805) sepia = ink
(806) stanna = tin
(807) sulphi = sulphur
(808) vitri = glass

For alloys we can use contractions in accordance with modern usage (e.g. magal for magnesium-aluminium alloys). Thus we have:

u cupra zinca (= cu-zi) = brass
u cupra stanna (= cu-sta) = bronze

(h) Human Affairs (52)
We may adopt as they stand:

gemini = twin(s) (zodiacal constellation)
manifesto = manifesto, declaration

U Manifesto de plu Homini Privilegio
The Declaration of the Rights of Man

virgo = virgin (zodiacal constellation)
agenda = agenda; programme; business (of a meeting)

anthropi = man (male human being); hus band; gentleman

(811) arma = army

un arma-pe = a soldier; warrior

(812) arti = art
(813) banca = bank; treasury
(814) bibli = book
(815) billeta = ticket, coupon

u vagoni billeta = railway ticket
plu sporto billeta = playing-cards
u nomino billeta = (323)

(816) bureau = (public) office
Similarly with names of other religious leaders and their followers.
(836) imperia = empire; imperial
(837) industri = industry; manufacture
(838) musea = museum
  u picto musea = a picture gallery
(839) nota or computo = bill; account
(840) parenta = parent
  un an parenta = a father
  u fe parenta = a mother
  u parenta parenta = a grandparent (with an or fe as context insists, e.g.:
  un an parenta fe parenta = paternal grandmother)
  plu pre parenta = ancestors; forbears
(841) poeti = poetry; verse; poem
(842) politica = politics; political
(843) polizi = police
(844) posta = post
  u posta billeta = postage stamp
  u posta theca = letter-box
  u posta bureau = post-office
(845) proletari = an employee; working-man
(846) propaganda = propaganda; preaching
(847) propria = property (legal)
  u tem propria = tenure
(848) prosa = prose
(849) regi = king; emperor; ruling queen; hereditary ruler
  u regi gyna = queen (consort)
(850) rentieri = rentier; shareholder; (with plu)
  leisure, class
(851) sacramenta = legal oath
(852) scientia = science
(853) secretari = secretary
(854) sibi  sib; brother or sister
un an sibi = brother (if context supplies no clue to sex)
u fe sibi sister (ditto)
u parenta sibi= uncle or aunt (with an or fe if context supplies no clue)

u parenta sibi fill = cousin

(855) telefon  telephone
(856) telegram  telegram
(857) thema  topic; issue; (matter); (question); subject (of discourse)(case)

(858) universita  university
(859) valuta  money; cash
(860) verba  word

Verba is the key-word for grammatical terms:

u vice-verba = pronoun (127)
u nomino-verba = noun (323)
u clavi-verba = verb (742)
u qualito-verba = adjective (385)
u limito-verba = adverb (286)
u copula-verba = conjunction (746)
u tendo-verba = preposition; directive (125)
u no-muto verba = particle (314)
u picto-verba = hieroglyph; pictogram (362)
u verba mero = syllable (19)
u verba semao = ideogram (413)
u post-verba = object (72)
u thema-verba = subject (857)
u verba-fa = phrase (49)
holo verba-fa = sentence (24) (49)

Supplementary Substantives

(874) cartoni  cardboard; pasteboard
(875) corpuscula  particle; grain
(876) glacia  ice

260
(877) **organa**  
organ; institution

(878) **phlogista or luciferi**  
match; lucifer

(879) **sphinctra**  
tap; switch

(880) **unita**  
step; pace; degree

*per unita* = *step by step; little by little; by degrees*
PART III

THE ETYMOLOGY OF INTERGLOSSA

CHAPTER X   EXPANSION OF VOCABULARY;
CONVENTIONAL FORMULAE

The preceding schema of Part II sets out the essential vocabulary of Interglossa. It lists all the words the beginner needs for fluent self-expression about everyday issues, if supplemented by internationally current technical terms, or by local names for local things and local institutions, where necessity arises. It does not set out to make full provision for the requirements of certain domains of technical discourse, such as law and architecture, which have no truly international vocabulary in the sense that medicine, engineering, cartography or horticulture have one. For such it will be necessary to draw up small residual batteries of technical terms. The fact that our essential word-list does not furnish us with snappy expressions to distinguish a felony from a misdemeanour in the legal sense need not therefore trouble us. In everyday life few people other than lawyers use such words in accordance with dictionary definitions dictated by law-court practice; and distinctions dear to lawyers of one country may have no local relevance in another. Except when we use technical terms of wide international currency, our vocabulary of daily use, even that of highly educated people, falls far short of a precision-proportionate to its diversity. Indeed, few people with a literary education use so common a word as animal in the same way as biologists, i.e. for any member of the animal kingdom including Homo sapiens. More usually the animal of a lawyer, of a novelist or of a classical scholar, is a mammal other than a human being.

Thus a language designed to reduce, to a minimum the necessary equipment for unaffected daily discourse about matters of common concern for people of different nationalities need not keep inside the strait-jacket of word-economy on every conceivable occasion. For stylistic reasons alone, a residual battery is desirable; and a living language must have space for growth. We have therefore to make room for assimilation of internationally current words1 and of additional

---

1 Lott, de Wahl, Jespersen and the I.A.L.A. have done all the necessary spadework of assembling the raw materials for such residual batteries from internationally current words and roots.
internationally current roots in conformity with the principles of sentence-landscape laid down in Chapter II. Some provisional rules of expansion are as follows:

(i) The number of pseudonyms, of articles, of verboids and, of amplifiers which can do service as modal auxiliaries or preposition-equivalents is fixed. Suggested exceptions are: (a) separation of (99) tele (far from, distant) from ultra (beyond); (b) addition of:

\[
\text{dia} (= \text{per via de}) = \text{through}
\]

(ii) No words are admissible if they are homophones of any words on the essential list on pp. 249 et seq.

(iii) Abstract words with the following Anglo-American terminals can become amplifiers if they have international currency:

(a) -ion words drop the -n, as when we make natio from nation. Hence acceleration, etc., become:

\[
\begin{align*}
\text{acceleratio} & \quad \text{evolutio} & \quad \text{relatio} \\
\text{communicatio} & \quad \text{excretio} & \quad \text{revolutio} \\
\text{cooperatio} & \quad \text{inventio} & \quad \text{secretio} \\
\text{digestio} & & \\
\end{align*}
\]

(b) -sm words add -o, so that we have for communism, socialism, materialism:

\[
\begin{align*}
\text{communismo} & \quad \text{socialismo} & \quad \text{materialismo} \\
\end{align*}
\]

(c) -graph and -log words add -o to these syllables in place of -y, ic, etc.:

\[
\begin{align*}
\text{hydrographo} &= \text{hydrography} ; \text{hydrographical} \\
\text{stenographo} &= \text{typing} \\
\text{zoologo} &= \text{zoology} ; \text{zoological} \\
\end{align*}
\]

(iv) Any well-established roots of international technical terms can become amplifiers signifying actions, states, qualities or processes by addition of -o to the stem, e.g.:
(a) With *date*:

- *ancylo* (= no-*recto*) = *crooked(ness)*
- *brachyuo* (= no-*longo*) = *shortness*
- *bradyo* (= no-*celero*) = *slow(ness)*
- *caco* (= no-*decoro*) = ugly, ugliness
- *diplo* = *double(ness)*
- *gymno* (= no-*vesto*) = bare(ness); naked(ness)
- *hygro* (= no-*desicco*) = moist(ure)
- *lepto* or *steno* (= no-*pachyo*) = slender(ness), thin
- *lisso* (= no-*rugo*) = smooth(ness)
- *loxo* (= non-*ortho*) or obliquo = oblique(ness)
- *mollo* (= np-*sclero*) = soft(ness)

(b) With *acte*:

- *colymbo* = diving
- *grapto* = engraving
- *nemato* — sewing
- *plankto* = floating
- *plecto* or *strepto* = plaiting; twisting
- *pio* = gentle(ness); tender(ness)

(c) With *habe*:

- *amblyo* = dullness) (of vision or hearing)
- *artio* = even (numbered)
- *deutero* or *secondo* = secondary
- *dino* = terrible; frightful(ness)
- *giganto* = enormous; gigantic
- *nanno* = tiny; dwarf(ness)

(v) Occupational (i.e. personal agent) terms related to (ii) (b) above (i.e. -sm words) may take -sti for -sm, e.g.:
u communisti — a communist
u materialisti = a materialist
u radicalisti = a radical

(vi) Occupational terms based on amplifiers other than those which end in -smo are -pe compounds, e.g. :
    u revolutio-pe = a revolutionary
    u theologo-pe = a theologian

(vii) Substantives which correspond to local things, offices and institutions or place-names, retain the local form or its equivalent in Roman script, e.g. :

    Island = Iceland
    Wien = Vienna
    Kopenhagen = Copenhagen
    Moskva = Moscow

(viii) Technical terms of which the form has been fixed by international agreement (e.g. binominal, botanical, and zoological epithets and names of elements) may retain their existing form.

(ix) A semi-technical substantive, of which the precise form (terminal or spelling) is subject to minor local variation, undergoes one or other of the following changes on assimilation :

    (a) Whole words which end in -um (cf. tympanum or ovum) or -on (cf. piston) take the plural -a form, e.g. :
        u sanatoria = a sanatorium
        u spermatozoa = a spermatozoon

    Note.—Some English words of which the German form retains the Latin -ium have the terminal -y, c.f. Laboratorium—laboratory = u laboratoria.

    (b) Whole words which end in -us take -i instead, e.g. :
        un umbilici = the navel
        u bacilli = a bacillus

    (c) Whole words which end in -e have the -a form, e.g. :
        (u) homozygota — thoroughbred (homozygote)
        (u) heterozygota = hybrid (heterozygote)

These rules suffice for adapting international names of plant or animal genera to daily use> when we refer to them frequently, e.g.:
\[ \begin{align*}
\text{pini} &= \text{pine} \\
\text{meconopsci} &= \text{Meconopsis} \\
\text{meleagri} &= \text{turkey (Meleagris)} \\
\text{pelargonia} &= \text{geranium (\text{Pelargonium})} \\
\text{lilia} &= \text{lily (Lilium)}
\end{align*} \]

(x) The rules for forming substantives from any roots available in the international vocabulary of technics are two: (a) If the root comes from a Latin or Greek noun of which the nominative singular ends in \(-m\) or \(-n\), \(-a\) or \(-e\), add \(-a\) to the stem, e.g. :

\[ \begin{align*}
\text{adena} &= \text{swelling} \\
\text{antra} &= \text{cave} \\
\text{aula} &= \text{furrow} \\
\text{carborunda} &= \text{emery} \\
\text{eclesia} &= \text{church} \\
\text{lacuna} &= \text{pit}
\end{align*} \]

\[ \begin{align*}
\text{marmora} &= \text{marble} \\
\text{radula} &= \text{file (tool)} \\
\text{spora} &= \text{spore} \\
\text{tribuna} &= \text{court; tribunal} \\
\text{turra} &= \text{tower; turret} \\
\text{xyla} &= \text{wood}
\end{align*} \]

\[ \text{zyma} = \text{yeast} \]

(b) If the root comes from a Greek or Latin noun of which the nominative masculine singular ends in any consonant other than \(n\) or \(m\), add \(-i\) to the stem, e.g. :

\[ \begin{align*}
\text{arci} &= \text{bow; arc} \\
\text{cirri} &= \text{curl} \\
\text{c cocci} &= \text{berry} \\
\text{crossi} &= \text{fringe; tassel} \\
\text{foci} &= \text{focus} \\
\text{hieri} &= \text{priest} \\
\text{inquili} &= \text{tenant}
\end{align*} \]

\[ \begin{align*}
\text{lecithi or} &= \text{yolk (of egg)} \\
\text{vitelli} &= \text{yolk (of egg)} \\
\text{matri} &= \text{mother} \\
\text{meli} &= \text{honey} \\
\text{patri} &= \text{father} \\
\text{pharyngi rhipi} &= \text{pharynx; throat} \\
\text{rhipi} &= \text{fan}
\end{align*} \]

\[ \text{salpingi} = \text{trumpet} \]

Our choice of terminals \(-i\) or \(-a\) for the substantives listed by number in Chapter IX is generally consonant with the preceding conventions of international technology; but it is occasionally necessary to transgress the rules to avoid the use of homophones. For example \(-piera\), which occurs in the names of nearly all orders of insects such as \textit{Lepidoptera}, would be a homophone of \textit{terra} (663). The terminal of \textit{pteri} (535) is thus to prevent confusion with \textit{terra} in speech.
We have here discussed residual word-lists with an eye on root material of wide international currency at present available; and all the roots employed in the preceding are widely current in international technical, more especially biological, terms. From the same source we have an ample choice of * synonyms, e.g. for the seasons:

\[
\begin{align*}
\text{aestiva} & \quad \text{hiberna} \\
\text{autumni} & \quad \text{verna}
\end{align*}
\]

Other synonyms worth considering as alternatives to words on our essential list of numbered items are:

\[
\begin{align*}
alveoli (= \text{sphena}) & \quad \text{maculo (=} \text{stigma}) \\
\text{arborei (=} \text{dendra}) & \quad \text{opistho (=} \text{retro}) \\
\text{arcti or nordi (=} \text{boreo}) & \quad \text{stega (=} \text{tecti}) \\
\text{australi (=} \text{meridio}) & \quad \text{styla (=} \text{columni)}
\end{align*}
\]

The introduction of \textit{aeypo} (in \textit{Aepyornis}, the fossil tallest bird) for \textit{tall} or \textit{high} and \textit{dolicho} (in \textit{dolichocephalic}) for \textit{long} would permit the reservation of \textit{alto} and \textit{longo} respectively for \textit{height} or \textit{level} and \textit{length} (see remarks on p. 94).

\textbf{Greetings, etc.}

It is necessary to have certain conventional phrases for conversation or correspondence. Essential ones are:

\[
\begin{align*}
\text{Saluto} &= \text{How do you do? or good-bye; good day; goodnight, etc.} \\
\text{Verito} &= \text{Yes} \\
\text{Assure} &= \text{By all means} \\
\text{No} &= \text{No} \\
\text{Zero} &= \text{By no means, not at all} \\
\text{Peti} &= \text{Yes, please} \\
\text{Gratio, no} &= \text{No, thank you.} \\
\text{Gratio} &= \text{Thanks} \\
\text{Pardo} &= \text{Excuse me}
\end{align*}
\]
For the beginning of a letter:

(a) Formal:
\[
X.Z! = \text{Dear } X \text{ (local title, Dr., Mrs., etc.) } Z \text{ (surname)}
\]

(b) Cordial:
\[
Z! = \text{Dear } Z \text{ (surname)}
\]

(c) Intimate:
\[
Y! = \text{Dear } Y \text{ (Christian name)}
\]

(d) Endearment:
\[
\text{Ge philo } Y! = \text{Dearest } Y \\
\text{Mi ge philo amico-pe! } = \text{My beloved friend}
\]

For the end of a letter:

(a) Formal:
\[
\text{Plu saluto } = \text{Yours truly, Yours faithfully}
\]

(b) Cordial:
\[
\text{Plu amico saluto } = \text{Yours (very) sincerely}
\]

(c) Endearment
\[
\text{Plu philo saluto }' = \text{Yours affectionately}
\]
CHAPTER XI
SAMPLES OF TRANSLATION FROM
ENGLISH TO INTERGLOSSA

The translations of the first three samples which follow are not based on the original sources. With the aid of the English version of (d) the reader can judge how far the word-economy of Interglossa is also compatible with economy of space,

(a) Canto 23

1. U Theo equi mi Ovi-pe. Mi post habe pan necesso Re.

2. An date preparo mi Clinica in phi chloro Agri. An acte controlo mi Pedi littora paco Hydro.

3. An date sano mi Logo. An acte dirigo Mi a Via de Verito pro an Nomino.

4. Cleisto chron Mi acte grado in Valli de Umbra de Morto; Mi non esthe phobo u Malo; causa Tu habe syn Mi. Tu Rhabdi plus tu Ovi-ru stimule consolo Mi.

5. Tu date preparo u Trapeza pro Mi contra mi Anti-pe. Tu stimule rheo un Olea epi mi Cephali. Mi Calyci acte rheo supero Ora.

6. Certo, un Eu plus u Pardo post kine retro Mi pan Di de Bio. Plus Re, Mi habe eco in Domi de Theo holo tem.

(b) U Petitio de Christi

Na Parenta in Urani:

Na dicte volo; tu Nomino gene revero;

Plus tu Crati habe accido; plus u Demo acte harmono tu Tendo epi Geo homo in Urani.

Na dicte petitio: Tu date plu di Pani a Na; plus Tu acte pardo plu malo Acte de Na; metro Na acte pardo Mu; Su acte malo de Na.

Peti Tu non acte dirigo Na a plu malo Offero; Hetero, Tu date libero Na apo Malo.

Causo Tu tene u Crati plus u Dyno plus un eu Famo pan Tem.—Amen.
(c) U Proto plus u Fino de communisti Manifesto


Quo loco un anti Partio habe eco; Su no g;ene aetio e Crati causo auto Communismo. Quo loco un anti Partio habe eco; Su no dicte protesto per iso pyro Verba allo de plu major laevo Partio allo de Mu major dextro comparo Auto.

Causo Re, Na vise bi Sequo :

(i) Pan europa Crati nu dicte confessio ; u Gommunismo habe gravo.

(ii) Harmono u nun Occasio, plu Communisti debito date


Per oligo verba, mu Piano eque u para Re.

Plu Communisti in pan Loco acte catalysu singulo laevo Partio anti u nu Civilisatio plus u nu politica Systemo.

Syn singulo homo Partio, Mu date phanerb u duco Gravo de propria Privilegio, cleisto major cleisto minor ge maturo.

Fino, Mu acte ergo tendo u Zygo de plu democrati Partio de singulo Natio pan-lo.

Plu Communisti esthe arrogo de No-crypto de plu Credo syn plu Piano de Auto. Phanero, Mu dicte ; plu Tendo de Mu poto gene pronto per zero Methodo no-cleisto u violo Victo anti pan nu grego Physio.

Plu archo Classi debito esthe phobo u communisti Revolutio. Plu Proletari poto perde zero Re no-cleisto plu Catena de Auto. U Geo posso eque u Pronto.
Pan Proletari de pan Natio : gene zygo.

(d) Un Atlantic Promisso

U President de United States syn duco Commissari-pe, Mr. Churchill, ge electio e regi Crati de United Kingdom, pre acte unio. Plus Mu esthe credo; Mu debito date publico plu communo Piano de singulo Natio; Su date eu baso un Espero de major eu Geo post nu.

Mono: Bi para Natio tentato gene zero major Terra zero hetero Pronto.

Bi: Mu volo vise zero terra Muto no-cleisto harmorio plu Volo, libero ge dicte, de singulo loco Demo.

Tri: Mu esthe revero u Privilegio de Electio e singulo Demo de geno Crati; Mu volo habe. Plus Mu volo vise u Verso de natio Privilegio plus Auto--crati pro singulo Demo; Su pre perde Mu per Violo.

Tetra: Harmono plu nu Promisso de Auto, Mu tentato acte catalyso pan Natio, cleisto mega cleisto micro, cleisto victo cleisto no-victo, de Gene occasio de Vendo allo de Merco syn iso Privilegio, plus de Habe u communo Via a plu geo Proto-ma necesso de Pluto.

Penta: Mu volo stimule communo de Ergo e pan Natio de Industri plus de Vendo tendo u major eu ergo Normo pro pan Pe plus u major Pluto plus u ge societo Immuno pro singulo Homini.

Hexa: Post fino Necro de nazi Oppresso, Mu esthe espero de Vise u Paco; Su date posso pan Natio de no--viro Eco in mu terra Limito; plus Su stimule assuro de pan Homini in pan Loco duro habe bio minus Phobo minus No-pluto.

Hepta: Geno para Paco debito acte catalyso pan Homini de non-inhibito Itinera trans plu mega Mari plus plu Oceani.

Octa: Causo plu Baso, cleisto de Politica cleisto de Persona, Mu esthe credo; pan Natio de Geo hecesso date fino u Violo. Causo zero post nu Paco poto habe duro; tem plu Natio duro tene plu Arma-ru de Mari plus de Terra plus de Aero tendo u Violo extra plu Terra de Auto; Mu esthe credo u Necesso de tracte plu Arma-ru apo plu iso Natio pre Proto de Systemo de universo Immuno. Harmono Re, Mu acte catalyso plus Mu stimule pan hetero Piano de tracte u fracto Masso de plu Arma-ru apo plu Homini; Su esthe volo u Paco.
(d) The Atlantic Charter

The President of the United States and the Prime Minister, Mr. Churchill, representing His Majesty's Government in the United Kingdom, being met together, deem it right to make known certain common principles in the national policies of their respective countries on which they base their hopes for a better future for the world:

First: Their countries seek no aggrandisement, territorial or other.

Second: They desire to see no territorial changes that do not accord with the freely expressed wishes of the peoples concerned.

Third: They respect the right of all peoples to choose the form of government under which they will live; and they wish to see sovereign rights and self-government restored to, those who have been forcibly deprived of them.

Fourth: They will endeavour, with due respect for their existing obligations, to further the enjoyment by all States, great or small, victor or vanquished, of access, on equal terms, to the trade and to the raw materials of the world which are needed for their economic prosperity.

Fifth: They desire to bring about the fullest collaboration between all nations in the economic field, with the object of securing for all improved labour standards, economic advancement, and social security.

Sixth: After the final destruction of Nazi tyranny, they hope to see established a peace which will afford to all nations the means of dwelling in safety within their own boundaries and which will afford assurance that all the men in all the lands may live out their lives in freedom from fear and want.

Seventh: Such a peace should enable all men to traverse the high seas and oceans without hindrance.

Eighth: They believe all the nations of the world, for realistic as well as spiritual reasons, must come to the abandonment of the use of force. Since no future peace can be maintained if land, sea or air armaments continue to be employed by nations which threaten, or may threaten, aggression outside of their frontiers, they believe, pending the establishment of a wider and permanent system of general security, that the disarmament of such nations is essential. They will likewise aid and encourage all
other practicable measures which will lighten for peace-loving peoples the crushing burden of armaments.

(e) U Mytho Historo ex Alexander Woollcott

U para Historo dicte de Cosette syn Anthropi de Saint Cyr ; homo Mu pre dicte Re ; plus homo Mu pre duro dicte de Re in phi fumo Popotes de, francais Arma poly Anni. Tem Pe pre acoust u minor no-callo Mixo de plu xeno Glossa in plu via Phago-do; plu Verba de aperatif Hora necesso gene tropo a Cosette, allo proto allo fino. Harmono pan Historo, Mlle. Cosette de Varietes eque u Gyna; Pe esthe maxima volo in holo France. Plu Urba-pe de Fe date publico syn Hedo ; Fe non eque u claustru Amico-fe de geno Regi. Mlle. Cosette eque u communo Du Barry, u chere amie de Democrati.

U Proto de Fe habe homo Nebuli Mero Demo dicte : Fe pre gene nato e plu Pisci-pe de Plonbazlanec littora Mari de Brittany. Plu hetero Pe dicte electio un hetero Historo. Harmono Re, Fe eque un Infanti de famo Dramo-fe no ge gameo de forto famo Regi. Assuro, Fe nun eque u natio Mytho. U francais Demo, holo Tem syn Esthe nocuo, pre poto gene reparo de Vulno de Auto-revero causa un eu Famo de Fe. Pe pre acte secto plu Picto de Fe e L'Illustration tendo Adhesio per Acu epi arma-do Mura. Frequo, Re pre date prospecto Fe, chic ge Sedi epi Trapeza de geno Phago-do. Pan francais Pedio-an vise Fe tem Soporo. Singulo francais Pedio-fe esthe holo logo auto Amico-pe; Su pheno dicte; causa Mi non espero gene Cosette; peti Tu kine a Mi proximo Potami; chron un Heli kine ad-hypo. Fe esthe sapio u Significo holo. Fe no dicte aetio An.

Pan Pe pre vise plu Picto .de micro Domi de Cosette topo Saint Cloud, plu pendo Viti, un Alto Horti Mura, un Avi-do syn poly micro vibro Phono. Anti plu apo Mura, un Alto supero Espero, Mu esthe arrego causa plu duro Micro-re de Mytho. Mu dicte ; zero Anthropi no-cleisto An; Su acte phoro penta kilo franc ; pre poto gene eco mono Nocti in Domi, Holo Re pre habe accido tem deca fino Anni de centi Anni pre nu ; chron u franc pre eque mono franc. Causo u gluco Zygo de Accido, major frequo pre nu, un Anthropi pre eque un Anthropi.

U rura Mixo de Tracte syn No-dissipo de Cosette date pleno plu Cadets de Saint Cyr per non-activo Non-hedo. Mu dicte de Fe holo

1 From While Rome Burns (Penguin Series).
hemi-photo Hora de Libero apo Scholo. Cauo un Arma-pe gene un homo micro Pecunio; zero Pe; Su post necesso acte controlo mega *Revanche*; posso acte phoro a Milito u Mnemo de Gyna, major callo de singulo residuo Fe in holo France. Pan Pe esthe credo; Re habe mal-accido. Assuro Re habe zero Gluco. Fino, mono Pe dicte per turbo Voco syn plu pyro Oculi. *Kilo Discipuli*

habe eco in Saint Cyr. Postulo satio Tem, singulo Pe habe satio Cerebra de gene penta Franc.

Cauo plu para Verba, u communo *Cosette Divino-valuta* proto gene accido syn Phobo de plu necesso Methodo, syn plu homo Acte de Sparta, syn plu homo damon-syn-pythias Credito, plus plu homo phanero Gramma de; pseudo Pettito a plu parenta Parenta plus a plu fe parenti Sibi. Zero chron Saint Cyr pre habe un homo Accido. U debito Hora, singulo Anthropi habe penta franc, allo de Auto allo de hetero Pe.


Pan Pe de Bio-tem post volo equ eque u Pedio-pe; Su gene victo de communo Divino-valuta. Plus Re, u para Pedio-pe; Su date nato un homo Proposo; post eque u Marechal de France.

Post Re, An proto acte riso causa u Picto de Pedio-pe syn plu astra Oculi kine a prosceni Porta de *Varietes* syn zero Re no-cleisto u Pedio plus Valuta. U Pecunio de Paris Itinero non habe in Detecte numero de An. An habe zero Argenta de equi Vagoni, de Flora-fa, de posso phago Unio. Fino, u Commandant dicte; An volo date pleno u Vacuo ex auto parenta Marsupia.

An non habe satio Valuta de plu residuo Re. Balle a Mi a Pedio-pe; Su gene victo; pre Itinero a Paris.

Post-eo, plu heli Radio, ge secto per *jalousies*, facte u Carta de Photo epi Tapea de Cosette. Fe gene hemi ortho syn Cogito de Duro de neo Di. Micro Cadet de Fe habe horizo syn gluco Stato de Infanti, minus soporo Picto. Causo un homo no-frequo Pedio ; Fe esthe amico.- Necesso, Fe proto esthe cogito de auto Pedio, de plu lyso Methodo; Fe pre kine a-supero u classi Scala per. Nu, Fe esthe cogito de plu pedio Di de Infanti. Fe esthe mnemo ; An nu acte itinero meso Mu. Celero, Fe proto esthe miro. Causo Fe eque geno Gyna; Su aete; Fe mote An per Chiri. Fe dicte :

Mi Palaeo-pe; acoust. Quo Methodo u Saint Cyr Cadet poto gene penta kilo Franc pro Auto.


Saint Cyr pre date a Mi u maxima gluco Verba de Laudo de holo Bio de Mi. Nu-di, Mi eque u Gyna, major arrogo de residuo Pe in France. Verito, Mi debito acte congruo. Tu post kine verso. Tu dicte a pan Pe; Cosette eque u Gyna; Su reacte. Tem Tu eque u palaeo Anthropi in Vendee; Tu dicte plu para Verba a tu fili-Fili. Mono chron, tem Pedio, Tu pre gene u Date, maxima premio in France. Plus Re, Tu no pre necesso acte pecunio. Zero sou.

Post Re, Fe acte foramino u Theca ; topo An vise Fe date crypto plu Billeta per Cleidi pre-nocti. Fe dicte syn callo Kine :

*Mi date a Tu holo Valuta de Tu.* Fe date ad An penta Franc verso.
CHAPTER XII ALPHABETICAL LIST OF VOCABLES
(INCLUDING SYNONYMS) ; MNEMOTECHNIC NOTES

I. ALPHABETIC LIST

A

(483) abdomini  (554) anseri  (635) baia
(551) acanthha  (77) antero  (705) balconi
(141) accido  (785) anthraci  (464) balle
(784) acidi  (810) anthropi  (157) baro
(483) acoustev  (556) api  (158) baso
(142) acro  (78) apo  (159) batho
(464) acte  (734) ara  (28) bi
(143) activo  (275) arbitro  (814) bibli
(733) acu  (153) archo  (160) bibo
(144) acuto  (736) argenta  (815) billeta
(76) a(d)  (811) arma  (161) bio
(180) adapto  (329) aromo  (738) blada
(145) adhesio  (154) arrego  (162) blasto
(146) aero  (484) arthri  (739) bomba
(147) aetio  (812) arti  (79) boreo
(809) agenda  (735) artilleri  (558) bovi
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(631) agri  (556) asini  (163) bronto
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(102) allo  (633) astra  (560) bulba
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(670) amyla  (153) authorito  (674) cafa
(4) an  (9) auto  (487) calca
(553) ana  (557) avì  (196) callo
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II. MNEMOTECHNIC NOTES

The reader can amplify the ensuing notes abundantly by reference to the three-shilling *Everyman’s English Dictionary* (Dent), Webster, *then Concise Oxford*, or any technical glossary such as *Beadnall’s* inexpensive *Dictionary of Scientific Terms* in the Thinker’s Library (Watts). International terms are liable to local variation of spelling appear in **black type**. For (i), (2), (3), see note on pp. 81-82.

- **an** polyandry; **androecium** (stamens—male part of a flower).
- **fe** feminine; feminism; female.
- **re** Latin *res* in republic (public affairs) and in reality, also in title of the great sixteenth-century treatise on mining technology, the **De Re Metallica** of Agricola (see 109). Things as opposed to appearances are real.
- **Persona** personality; personify; impersonal.
- **mu** multitude; multifarious; multiply.
- **auto** automobile; automatic; autosuggestion.
- **recipro** reciprocity; reciprocal.
(11) su subject.
(12) u or un unity; unify; unilocular (one-chambered—see below).

(13) plu plural; plurilocular (of seed-chamber with several compartments—53).

(14) oligo oligarchy; oligochaeta (earthworms, distinguished from sea-worms or Polychaeta by having few locomotory bristles).

(15) pan pan-American; pantheism (436); pantisocrat (44)(826).

(16) poly polygamy (m- any marriages—244)/ polygyny (834); polychaeta (sea-worms—see note to CI4))*

(17) singulo singular.
(18) geno generic; genus.

(19) mero meristic (of variation with respect to number of parts); metamerism (of body, if divided into a succession of like parts); isomer (with equal parts—44), polymer (16) are common terms in elementary chemistry. In ‘elementary biology we have pentamerous (31), tetramerous (30), etc. (of flowers with parts in fives, fours, etc.).

(20) solo solo; solitary.

(21) holo holocaust (wholesale sacrifice); holozoic (completely animal—630); holophytic (completely plant-like—603).

(22) mega megaphone (358); megalith (bronze-age stone monument—52).

(23) micro microscope (412); micrometer (114); microbe; microphone (358).

(24) quo See (42).

(25) satio satiate; satisfy.

(26) zero zero.

(27) mono monogamy (244); monologue; monocotyledon (flowering plant with a single seed leaf).

(28) bi bigamy (244); bicycle (712).

(29) tri tricycle (712); triangle; trisect (413); trinity.

(30) tetra tetrahedron; tetramerous (19); Herod the tetrarch (19)*

(31) penta pentagon (248); Pentateuch; pentamerous (19); pentameter (114).

(32) hexa hexagon (47); hexamerous (19); hexameter (114).

(33) hepta heptarchy (153); heptamerous (19).
(34) **octa** *octameter (114); octagon (248).*
(35) **nonnea** *nonagenarian.*
(36) **deca** *decalogue; decimetre (114).*
(37) **centi** *centurion; centimetre (114)*
(38) **kilo** *kilogram (717); kilometre (114).*
(39) **myria** *myriads; myriopoda (centipedes and millipedes’ which have a very large number of legs—535).*
(40) **hemi** *hemisphere (730); hemiplegia (paralysis of one side, i.e. half of the body).*
(41) **peti(tio)** *petition.*
(42) **que(stio)** *question; query.*
(43) **no(n)** *non-intervention; non-aggression (455).*
(44) **iso** *isosceles; isomerism (with same parts—19); isomorphic (of crystals with same geometrical form (311); pantisocrat (15) (826).*
(45) **major** *major; majority; Ursa Major (constellation of Bigger Bear).*
(46) **minor** *minor; minority; Ursa Minor (constellation of Lesser Bear).*
(47) **CAmeri** *in camera; chamber.*
(48) **DOmi** *domicile; domesticity (housecraft).*
(49) **FAscio** *Fascist—so-called after the Roman fasces, a bundle of rods carried by the Lictors, an appropriate symbol of the essential brutality of Fascism.*
(50) **fi** *filament; filamentous; filar; filigree*
(51) **instRUmenti** *instrument*
(52) **LIni** *neolithic (321); palaeolithic 341); lithography (250); monolith (single stone monument of bronze age—27).*
(53) **LOco** *locality; locomotive (475); locus (of a point); allocate.*
(54) **MAteria** *material; materialism.*
(55) **MEchani** *mechanic; mechanical; mechanism.*
(56) **MObili** *Furniture — movables, i.e. mobile possessions—French meubles.*
(57) **TExti** *textile; texture.*
(58) **VAsa** *vase; vessel (from Latin diminutive); vasa deferentia (vessels which convey semen from the testicles to the urethra); vasectomy is sterilization by section of the blood vessels—475).
(59) **VESTo** vesture; divest; vest.  
(60) **ZOna** zone.  
(61) **anni** anniversary; annual.  
(62) **chron** chronicle; chronology (289); chronometer (114); synchronize (123).  
(63) **di** diurnal; sundial (for keeping track of day light).  
(64) **duro** duration; endure; durative; durable.  
(65) **eo** Eoanthropus (Piltdown Man—810); eohippua (three-toed horse); eocene (geological period of dawn of modern mammals and birds); eolith (early stone implement—dawn of craftsmanship—52).  
(66) **hesperia** Hesper (Venus as evening star); Hesperides (Greek mythology—daughters of the evening star).  
(67) **hora** horoscope (birth-hour prospect—411); horology (clock technology).  
(68) **mensis** menses (monthly sexual cycle of human female); menopause (cessation of monthly cycle).  
(69) **mini** minute.  
(70) **nocti** nocturnal; equinoctial (the Equinoxes are the times when night and day are of equal length—468).  
(71) **nu(n)** pan-Aryan root in now—“Nunc Dimittis (= now lettest thou thy servant depart—Lu. 2,29).  
(72) **post** postpone; postdate; posthumous.  
(73) **pre** previous; presuppose; preconception; prehistory.  
(74) **seci** second.  
(75) **tem** temporal; temporary; contemporaneous.  
(76) **a(d)** afferent (of nerves or vessels taking impulses or fluid towards a centre); adduct.  
(77) **antero** anterior.  
(78) **apo** apocarpous flowers are flowers with ovaries apart, hence with styles away from one another, like those of delphinium or buttercup; apostasy is putting oneself apart from, going away from one’s faith or tradition; apostle (one sent away on a mission).  
(79) **boreo** aurora borealis (Northern Lights).  
(80) **contra** contraposition.  
(81) **dextro** ambidextrous; dextro-rotatory (of solutions which rotate the plane of polarization of a beam of light to the
right); **dextrose** (a dextro-rotary sugar, synonymous with **glucose**).

(82) **epi**
epicycle (circle with centre on boundary of another);
epiphyte (plant which grows on another, e.g.i ivy);
epigynous (of flowers like daffodil, with petals and stamens lying on top of the female parts—834); **epidermis** (surface layer of skin —501); **epitaph** (words on gravestone).

(83) **e or ex**
extract; exodus; efferent (of nerves or vessels taking impulses or fluids from a centre); exit (way from).

(84) **extra or ecto**
extaneous; extradition; extraordinary.

(85) **hypo or**
hypodermic (under the skin—501); hypogynous (of flowers like buttercup or primrose with stamens and petals below womanly parts—834). infra infra-red; infra dig. (beneath one’s dignity).

(86) **in**
insert; inject.

(87) **inter**
international (between nations—31 J); interpose (come between); insterstice (gap between).

(88) **laevo**
laevo-rotatory; laevose (a laevo-rotatory sugar abundant in honey, suitable for diabetics: best source, Jerusalem artichoke).

(89) **latero**
lateral; bilateral.

(90) **littora**
littoral (shore-dwelling).

(91) **meridio**
The celestial **meridian** is the imaginary great circle passing through the zenith and the south point of the horizon. Sailors speak of the southing of a star when it crosses the meridian. The terrestrial meridian of an observer is a line joining his position to the south point on the horizon.

(92) **meso**
Mesopotamia (between the rivers—659); meso-zoic (middle of three main geological divisions of time—the secondary era of animal life—630); mesocephalic (head of middling size and breadth—400); mesophyll (middle part of leaf —601); mesogloea (middle layer of jelly between outer and inner body wall of jelly-fish- or polyp).

(93) **Occidente** Occident; occidental.
(94) oriento  orient; oriental.
(95) para    What is here is what is near; parasite (a creature which lives with its food here); parallel lines are always equally near to one another.
(96) peri   perimeter (114); periphery; periscope (411); perigynous (of flowers—see 82 and 85).
(97) retro or dorsi  retroactive; retrospect; retrogression.
(98) supero  supranational; superior; insuperable (what you can’t get on top of).
(99) tele or ultra  telephone (357)» telegram (833); telescope (481).
(100) topo  topography (250); toponymy (study of place names).
(101) trans  irans-Atlantic; transfusion.
(102) allo  allergies (such as asthma and hay-fever, so named because the same constitutional defect expresses itself in one or other of several forms, i.e. works—, 214—in alternative ways); allotropy (power of same substance to turn into alternative forms—442. Diamond and Carbon are allotropic modifications, i.e. ternative forms of carbon).
(103) anti  anti-Nazi; antivivisection (458) (413)7 antiseptic (440); antimony'(324). : 
(104) causa  cause; causal.
(105) cleisto  cleistogamous flowers, like the winter flowers of some violets, mature without unfolding, so that marriage—(244)—occurs while the stamens are closed in (included by) the petals.
(106) comparo  comparison; comparable.
(107) conditio  condition.
(108) congruo  congruent; incongruous.
(109) de  With the same meaning in the titles of books which have been landmarks of science, e.g. De Revolu- tionibus of Copernicus, De Fabrica Humani Corporis (223) (540) of Vesalius; De Motibus (475) of Kepler, and De Generatione Animalium of Harvey; De Re Metallica (6) (799) of Agricola,
(110) digito or indicio  digit (finger with which we point things out).  indicate.
(111) functio function.
(112) harmono harmony; harmonize.
(113) homo homogeneous (i3); homology (289); homophone (358)
homozygote (pure genetic type, formed from union of
like gametes).
(114) metro. metric; metronome; gasometer (796); hexameter(32).
(115) minus minus.
(116) pendo pendulum; pendulous; depend; suspender.
(117) per per rail; per steamer; per bearer.
(118) plus plus.
(119) postulo postulate.
(120) pro pro-Nazi; pro-Fascist; pros and cons; provide.
(121) proximo proximity; approximate.
(122) sequo consequence; sequel.
(123) syn synchronism (timing together); syndrome (of symptoms which run together—206); synar-pous (of flowers with ovaries fused together—565); synopsis (coming together of chromosomes in the reduction division); synergic (of drugs which work together).
(124) tacto contact; tactile.
(125) tendo tendency; tendentious; intend.
(126) verso reverse; converse; inverse.
(127) vice viceroy; vicar (God-substitute); vice-president; vice-chancellor.
(128) volo volition; voluntary.
(129) debito debit; indebtedness (what we ought to pay); duty (corruption of same root).
(130) espero Esperanto (an unduly hopeful pioneer contribution to language-planning); desperate (= de-hoped).
(131) hedo hedonism.
(132) moro mores (social custom); morality (conformity to usual habits of fellow human beings).
(133) necesso necessity; necessary.
(134) permito permit; permission.
(135) pheno phenomenon (because Greek idealists called reality appearance and vice versa); phenotype (individuals with same outward appearance but different hereditary constitution).
(136) posso possible.
(117) poto potential; impotent.
(138) preparo preparation; preparedness.
(139) proto protocol (first draft); prototype; protoplasm (cell substance, supposedly most primitive form of living matter); protozoan (supposedly most primitive animals—630); protogynous (of flowers in which the female organs first ripen—834).
(140) tentato tentative; tentacle (what an animal or plant uses to try to catch hold of something).
(141) accido accident.
(142) aero acropolis (part of city on top of hill); acro megal (gigantism with enlargement of bones at ends).
(143) activo activity; active.
(144) acro or acute.
    oxyo oxygen; oxalic acid (based on metaphorical usage for sharpness of taste).
(145) adhesio adhesion; adhere.
(146) aero aerial; aeronautics; aeroplane.
(147) aetio aetiology (study of what to blame for a disease).
(148) algo neuralgia (524); analgesic (deadening pain).
(149) alieno or alien.
    xeno xenophobia (fear of foreigners—356).
(150) alto altitude.
(151) amico amicable; amiability.
(152) anemo anemometer (wind gauge—114); anemophilous (of flowers which conduct their lovemaking by wind—355).
(153) archo or monarchy (272); autarchy (9); heptarchy (33).
    authorito authority,
(154) arrogo arrogant.
(155) assuro or assurance.
    certo certainty; ascertain.
(156) attendo or attendance.
    tardo tardy; retard.
(157) baro barometer (114); barograph (self-recording barometer—250); isobar (44).
(158) baso or basis; basic.
    evido evidence.
(159) batho bathos.
(160) bibo bibulous; imbibe; imbibition.
(161) **bio** amphibious; bioscope (411); biology (289).

(162) **blasto** Many international embryological terms, e.g. **blastoderm** (disc-like embryo or *bud* seen on the surface of a fertile hen’s egg as a red speck).

*or gemmo* gemmation (budding); *gemma* (bud).

(163) **bronto** or **brontosaurus** (largest known animal. Since it died out in the Cretaceous (792), we cannot hear the *thunder* of its tread to-day),

**explosio** explosion.

(164) **canto** chant; canticle; incantation.

(165) **captivo** captive.

(166) **catalyso** or **catalyst** (reagent which *lubricates* or *helps* chemical-reaction)

**lubrico** lubricant (to help the wheels to go round).

(167) **cavito** or **cavity**.

**coelo** coelom (body cavity); hydrocoele (263); acoelous, and many other international anatomical terms.

(168) **celebro** or celerity; accelerate. **veloco** velocity.

(169) **celero** or **celerity**; accelerate. **certifico** certify; certificate.

(170) **chloro** chlorine (a greenish gas); chlorophyll (green pigment of leaves—602).

(171) **cholo** or choleric (because anger once believed to be connected with the *bile*); taurocholates and glycocholates (bile salts),

**iro** irate.

(172) **choro** choronic; chorus (originally singing dancers); *terpsichore* an.

(173) **chromo** panchromatic (of photographic plates responsive to light of all colours—15); polychrome (films—16); *chromosomes* (cell organs which carry the genes of heredity, colour deeply with certain dyes—540).

(174) **claustro** or cloister; claustrophobia (fear of confinement—356).

**angio** angiosperms (flowering plants with closed ovaries in contradistinction to Gymnosperms, like pine and fir, with seeds exposed on the leaves of the cone—618).

(175) **clepto** cleptomania.
clino incline; declination (slope of star with reference to the plane of the equator, tabulated for finding latitude at sea). Many international geological words, e.g. syncline.

cogito excogitate.

cuito coitus.

comico comic; comedy.

communo communal.

competo compete.

confessio confess.

consolo consolation.

controlo or control.

dirigo direction; dirigible (a balloon with movement under a pilot’s direction).

credito credit.

credo credo; credible; creed.

critico criticism

cryo cryolite (sodium * aluminium fluoride, imporant alu-

minium ore with snowy appearance. Cryo- hydric point

is the lowest temperature to which a given salt can
depress the freezing point—263).

crypto cryptic; crypt; cryptogams (flowerless plantssuch as

ferns or mosses, so-called because their marriage arrange-

ments are hidden from the eye— 244).

culino culinary.

culto cultivation; culture (e.g. of bacteria)...

curo curator; curate (concerned with the souls of his clients).

curvo curve; curvature.

cyano cyanosis (blueing of skin when cold, etc.); cyanophyceae

(blue-green algae) ; haemocyanin (blue pigment in

blood of snails, lobsters, etc., but not detectable in that

of aristocracy—511).

decoro or decorative

callo calligraphy (beautiful handwriting—250) ; callisthenics

(girls’ gymnastics alleged to promote a good figure).

defecto defect.

demo democracy (826); endemic; epidemic.

demonstro demonstrate; demonstrable.

desicco desiccate.

disputo disputatious.
(202) dissolpo  dissipate.
(203) divino  divination.
(204) diviso  divisor.
(205) dramo  dramatic; drama.
(206) dromo or dromedary; hippodrome (where horses run around —see note on 659).
    curso  cursive; cursorial (of limbs adapted to running); course.
(207) duco or Duce (title of Mussolini who led Italy into evil ways); induce.
    hegemo  hegemony.
(208) dyno  dynamic; dynamo (electrical power generator); dyne (international unit of force).
(209) eco or ecology (study of where plants and animals reside), residio  residence.
(210) electio  election.
(211) electro  electric; electromagnetic (295); electrostatic (427).
(212) elemento or element; elementary.
    haplo  haploid, international technical term in genetics meaning simple, in opposition to diploid (double).
(213) equatio  equate.
(214) ergo  energy; erg (international unit of ivory).
(215) erro  error; err.
(216) erythro  erythrosin (a red dye); erythrocyte (red blood corpuscles—498); erythema (local reddening of skin).
(217) espio  espionage.
(218) eu  euphemism; eupeptic; eulogy; euthanasia (killing for the good of the victim).
(219) examino or examination. experimento  experiment.
(220) excesso  excess (nothing succeeds like it).
(221) expecto  expect; expectation (of life).
(222) experto or expert.
    techno  technician.
(223) fabrico  fabricate; the title of the great sixteenth-century ork on anatomy mentioned in (109) means ‘concerning the structure of the human body'.
(224) facilo  facility.
(225) famo  fame; infamy.
(226) fatigo  fatigue; indefatigable.
(227) fero  feral.
(228) **fertilize.**
(229) **final; finish; finis.**
(230) **fiscal.**
(231) **fissure.**
(232) **fixed.**
(233) **flagellum** (whip-like tail of the sperm by which it moves); **flagellata** (micro-organisms which move by means of one or more flagella); **flagellation.**
(234) **flavour.**
(235) **fortissimi** (organ stop); **aquafors** (old name for nitric acid because of its intense activity)* Cf. French fort(e).
(236) **fortune-teller.**
(237) **fracture.**
(238) **frequency.**
(239) **friction.**
(240) **frigid.**
(241) **frustration.**
(242) **fugitive.**
(243) **fumes.**
(244) **polygamy** (16); **monogamy** (27); **bigamy** (28); **gamete** (sex cells—sperm and egg—from whose marriage a new life begins); **phanerogams** (354); **cryptogams** (190).
(245) **genetics.**
(246) **glauco** or **glaucous** (of stems or leaves with a greyish bloom), **polio poliomyelitis** (infantile paralysis) is due _ to inflammation of the grey matter of the spinal cord.
(247) **glucose** (a sugar—international root in many sugary substances, i.e. substances with a pleasant taste); **glycosuria** (diabetes-condition characterized by presence of sugar in urine).
(248) **octagon** (34); **hexagon** (32); **pentagon** (31).
(249) **digitigrade** (of animals which walk on their toes, like the horse—110); **plantigrade** (of animals that walk on the soles of their feet, like, the cat).
(250) **telegraphy** (9g); **calligraphy** (196); **photography** (359); **lithography** (52),
(251) **gratitude; ingratiating.**
(252) gravito  gravitation (falling is acceleration in virtue of the earth’s gravitational field).
(253) gravo  grave; gravity.
(254) grego or partio  gregarious.
(255) gyro  gyrate; gyroscope (411).
(256) hagio or hagiolatry (worship of saints, i.e. sacred persons—396); hagiography (writing about saints—250). sacro s a - cred.
(257) helico or spirio  helicoid (mathematical term for spiral).
(258) helo or servio  helot.
(259) hetero  heterogeneous (18); heterodoxy (having opinions different from those of the herd); hetero- zygote (hybrid—see note on p. 129).
(260) historo  story; history.
(261) horizo  horizontal (the plane bounded by the honzonf.
(262) humano  humane letters or the humanities are polite, (as opposed to useful) learning.
(263) hydro  hydrant; hydrogen; hydrophobia (357); dehydrate.
(264) immuno  immunity.
(265) impacto  impact.
(266) impero  imperative.
(267) inflatio  inflate.
(268) inhibito  inhibit.
(269) insuro  insurance.
(270) investo  investments.
(271) iodeo  iodine (so-called because it has a violet vapour).
(272) itero  reiterate; iteration (method of solving equations by repetitive approximation).
(273) itinero  itinerant.
(274) judico or judicious; judgment.
(275) juro  jury (ostensibly to see fair-play).
(276) lapso  lapse (slip of memory); lapsus linguae (slip of the tongue).
(277) laudo  applaud; laudatory.
(278) **lavo**  lave; lavatory (actual); **lava** (washes down the slopes of a volcano); **laver** (Biblical name for vessel for Jewish priest’s ablutions).

(279) **lecto**  lectern (reading-desk); **lecture** (too often read in universities).

(280) **lego**  legal.

(281) **leuco**  leucocyte, white blood cells—498, including **phagocytes** (354), in contradistinction to **erythrocytes** (216); **leucorrhoea** (398); many other medical and biological terms.

(282) **liberalo**  liberality.

(283) **libero**  liberate; liberty.

(284) **libido**  International technical term for lust; **libidinous**.

(285) **ligato**  ligate; ligature.

(286) **limito**  limit.

(287) **lineo**  linear.

(288) **liquo**  liquid.

(289) **logo**  horology (67); zoology (630); geology (645); palaeontology (342); pathology (348).

(290) **longo**  elongate.

(291) **luco**  translucent.

(292) **luteo** or **corpora lutea** (discharged follicles of egg cells in Ovary of human being or other mammal, so-called because charged with a yellow pigment); **lutein** (yellow pigment of yoke),

**xantho**  Many medical and biological terms, e.g. **xanthin** (soluble yellow pigment of flowers); **xanthophyll** (yellow colouring matter of autumn leaves—602); **xanthophore** (contractile yellow pigment cells in skin as opposed to melanophores—see 300); **xanthoderma** (yellowing of skin—a disease—501).

(293) **lyso**  analysis (separation into parts); **hydrolysis** (separating organic compounds into constituent parts by the action of water—263); **lipolysis** (separation of fats into glycerine and fatty acid—519).

(294) **magico**  magic.

(295) **magneto**  magnetic.

(296) **malo**  malefactor; maledictory (467); malevolent (128); malign.

(297) **mano** or **manometer** (pressure gauge for registering rarefaction of gas—114).
diluto  dilute.

(298) masso  mass (in chemical sense of the term).
(299) maturo  maturation; mature.
(300) melano  melanic; melanophore (black pigment cells in skin of chameleon and other animals which change colour because of their behaviour—358); melanesia (654).
(301) merco  mercenary; commerce; merchandise.
(302) metodo  method.
(303) milito  military; militant.
(304) ministro  minister; administration.
(305) miro or  miracle; the network of blood-vessels in the gas gland of the swim bladder of Fishes is called the rete mirabile (769).
thaumo  thaumaturgy (wonder-working—214).
(306) miso  misogynist (834); misanthropist (810).
(307) mixo  mix; mixture.
(308) mnemo or  mnemonic.
memo  memorandum; memory.
(309) monito  admonition.
(310) mordo  mordant.
(311) morpho  amorphous; isomorphic (of crystals with identical shape—44); morphology (study of form as opposed to function—389).
(312) morto  mortality.
(313) musico  music.
(314) muto or  mutable; mutation; mutant (new type resulting from hereditary change).
vario  variable; variation.
(315) mytho or  myth.
fantaso  fantasy.
(316) narco  narcotic; narcotize; narcosis.
(317) natio  nation.
(318) nato  natal; native; natality; prenatal.
(319) necro  necrosis (tissue-destruction); necromancy (communication with the dead).
(320) negotio  negotiate; negotiable.
(321) neo  neolithic (new stone age—52); neologism.
(322) nocuo  nocuous; innocuous.
(323) nomino  nominate.
(324) nomo  economy (originally stewardship—209); agronomy (631); astronomy (633); bionomic (161).

(325) normo  norm; normal.

(326) nullo or nullify. quito  quittance; acquit; quit.

(327) numero  numeral; enumeration.

(328) occasio  occasion.

(329) odoro  or odour; malodorous (296). aromo  aroma; aromatic.

(330) offero or offer.

(331) onero or onerous. liabilo  liability.

(332) oppresso or oppress. persecuto  persecute.

(333) ordino  ordinal.

(334) orientatio or orientation. attitudo  attitude.

(335) orno  ornate; ornament.

(336) ortho  orthopedic (349); orthogonal (of vertical projection—248); orthotropous (of ovules with micropyie—383—vertically above the stalk, i.e. turned upwards—442).

(337) osculo  osculation.

(338) oxidatio  oxidation.

(339) pachyo  pachydermatous (thick-skinned—501).

(340) paco  pacify.

(341) palaeo  palaeolithic (old stone age—52); palaeontology (289).

(342) papillo or papilla. projectio  projection.

(343) parallelo  parallel.

(344) paralyso  paralysis.

(345) parasito  parasitism.

(346) pardo  pardon.

(347) patho  pathology (289); pathogenic.

(348) pecunio  pecuniary.

(349) pedio  pediatrics; paediogenesis (of animals which reproduce in the larval condition).

(350) penito  penitent.

(351) peno  penal.

(352) phaeo  phaeophyceae (brown algae, in contradistinction to chlorophyceae, green algae—171—cyano- phyceae, blue algae—195—and rhodophyceae, red algae—398).
phago or phagocytes—name for white blood corpuscles which eat bacteria.

dieto dietetics.

phanero phanerogams (flowering plants and conifers—so-called because their marriages are manifest to the eye—see note on 211).

philo entomophilous (of flowers which make love by insect messengers); anemoptylous (of flowers which make love by wind—152); philoprogenitive; philanthropist (810).

phobo phobia; claustrophobia (175); agrophobia (631).

phono gramophone (833); dictaphone (467); telephone (99); microphone (23); phonograph (250).

phoro Many international biological terms, e.g. melanophore (299) and xanthophore (292), so-called because of pigments they carry; also semaphore (414).

photo photic; photography (250); photoelectric (211); photometer (114); photosynthesis.

phreno schizophrenia (split personality—409); oligophrenia (mental defect—14).

physio physiocrat (826); physics.

picto picture; pictogram (833).

piano plan.

plato platitude (a flat saying); plateau; platyhelminthes (flat worms—626).

pleno plenary; plenitude.

plico plicate (folded).

pluto plutocrat (826).

pluvio pluvial; pluviometer (rain gauge).

privileged privilege.

producto product

praxo practical.

premio premium.

promisso promise; promissory.

proposo proposal.

prospero prospect (“where every prospect pleases”).
protesto protest; Protestant.

pseudo pseudonym (false name); pseudo-Gothic (sham Gothic); pseudopodium (sham foot of microorganism—535).

publico publicity.

pudo pudenda (privy parts of body, customarily regarded as disgusting to exhibit)-

puro purity; purification.

pylo or pylorus (aperture from stomach to intestine) ; micropyle (perforation in the wall of the ovule for entry of pollen tube), perforate perforate.

pyro pyre (funeral fire); pyrex (glass to withstand fire); pyrotechnics (fireworks) ; pyrkelometer (instrument to measure heat of sun’s flame—646 and 114) ; pyrometer (high temperature measurer- 114); empyrean.

qualito qualitative.

radio radio; radium; radiation.

rapo rapacious; rape; rapine (seizure of goods by force).

raso or razor.

talo talon.

ratio ratio.

recto rectilinear (387) ; rectangle.

reflecto reflector; reflect.

religio religion.

reparo reparations; repair; irreparable.

residuo residual.

resisto resistance (electric or tensile).

revero or revere.

latrio idolatry; hagiolatry (256); Mariolatry.

rheo rheostat (electric current regulator) ; diarrhoea; amenorrhoea (cessation of monthly flow); rheotaxis (orientation of aquatic animal to current) ; rheoscope (device for watching a stream of images—precursor of cinema—411).

rhodo rhododendron (575) ; rhodophyceae (red algae).

rigo rigid; rigor mortis (death stiffness).

riso risible; derision.

rugio rugose (botanical term of stems or leaves of coarse texture).

sado sadist.

salto saltation; saltatory (of jumping animals).
(404) saluto  salutation.
(405) sano  sanity; sanatorium.
(406) sapio  sapient; homo sapiens (the most knowing of the ground apes).
(407) sapro  saprophyte (plants which live on decaying organic matter, e.g. mushrooms.—603).
(498) schizo  schizophrenia (see 360 above); schizocarpous (of fruits which split like those of the geranium—565).
(409) scholo  scholastic; school.
(410) sclero  sclerenchyma [hard tissue of plants]; sclerosis (hardening of skin); sclerotic (hard layer of eyeball).
(411) scopo  periscope (96); epidiascope; telescope (99).
(412) secto  section; dissect.
(413) semao  semaphore (transmitting signals—358); semiotics (study of words as signals of meaning).
(414) sensitivo  or sensitively.
(415) recepto  receptor (sense organ); receptivity.
(416) serio  serial.
(417) severo  severity.
(418) significo  significance; signify.
(419) siphono  siphon.
(420) societo  society.
(421) solemno  solemn.
(422) stato  static; statocyst (sense organ which records bodily displacement from resting position).
(423) sporto  sport.
(424) specio  specimen; species; specify.
(425) sporto  sport.
(426) stagmo  stalagmite (icicle-like deposit in caves due to dripping of water with dissolved salts); stalagmometer (114)-
(427) stato  static; statocyst (sense organ which records bodily displacement from resting position).
(428) stereo  stereoscope (arrangement of lenses to give solid picture—111); stereotaxis (animal reaction to contact with solids); stereoisomers (optically active molecules with same solid—i.e. three-dimensional—orientation—19 and 44).
(429) stigmo  stigmatize (stain the character).
(430) strategic  stratagem.
(431) summatio summation.
(432) sympto symptomatic.
(433) systemo system; systematic.
(434) tensio tension; tensile.
(435) testimo testimony.
(436) theo theology (289); theocracy (826).
(437) thermo thermometer (114); isotherm (44).
(438) tolero tolerance (to opinion or to a drug).
(439) tono tone.
(440) toxo or antitoxin; toxic; toxicology (289).
    sepso sepsis; antiseptic.
(441) traumo traumatic; trauma.
(442) tropo In international botanical words which describe orientation
    of plants to external agencies, e.g. heliotropism (turning
    sunwards like the sunflower—646); geotropism (turning
    earthwards like roots of a germinating seed—645).
(443) turbo turbulent (motion).
(444) typo typography (250); isotype (Neurath’s international
    picture-language, with the printer’s sign as near as
    possible like what it stands for—44).
(445) umbro penumbra (half-shadow); umbrage; adumbrate (fore-
    shadow).
(446) uniformo uniformity.
(447) unio union; reunion
(448) vacuo evacuate; vacuous; vacuum.
(449) valo value; monovalent (27); polyvalent (»6).
(450) vaporo evaporate; vapour.
(451) vendo vendor,
(452) verito verity; veritable.
(453) vibro or vibration; vibratile.
    oscillo oscillate; oscillatory; oscillograph (250).
(454) victo victory.
(455) violo or violence; violate.
    aggresso aggressor.
(456) viro virulent; virus.
(457) visito visit.
(458) vivo vivisection; vivacious.
(459) voco vocal.
(460) volumo or volume; volumetric (114).
capacito  capacity.

(461) vulno  vulnerable.

(462)zygo  zygote (fertilized egg produced by fusion of two gametes); homozygote (pure-bred individual produced by union of like gametes); heterozygote (hybrid produced by connexion between unlike parents).

(463) acouste or acoustics.

audie  audience; audible; audiometer (114).

(464) acte  act; actor.

(465) balle  ballistics; ball.

(466) date  dative; data (what you are given).

(467) detecte  detection; detectable.

(468) dicte  dictaphone (357).

(469) equie  equation.

(470) esthe  aesthetics; anaesthesia.

(471) facte  factory; artefact (812).

(472) ge  See gene.

(473) gene  genesis.

(474) habe  Habeas corpus.

(475) kine  kinetic; kinema. (moving pictures).

(476) mote  motor; motion.

(477) perde  perdition.

(478) reacte  react.

(479) stimule  stimulate.

(480) tene  tenure; tenacity.

(481) tracte  tractor; extract; attraction.

(482) vise  visible; vision; visual.

(483) abdomini  abdominal.

(484) arthri  arthritis; arthropoda (see p. 85).

(485) brachi  amphibrach (in prosody a foot of two short arms with a long waist:  ); brachial (of main arm nerve, artery or vein).

(486) bucca  buccal (of cheeks or mouth).

(487) calca  calcaneum (heel bone).

(488) cantha  epicanthial (fold "of eyelid characteristic of Mongolian peoples).

(489) cardia  cardiac; pericardium (cavity'around heart).

(490) carpi  carpus (wrist).

(491) cephalı  cephalic (of head).
cerebra cerebral lobes; cerebration.
cervica cervical vertebrae.
chiri chiromancy; chiropodist (536); chiroptera (bats, of which the wing is the greatly elongated hand —537).

Note.—Hand in technical terms is always the Greek chir-, scarcely ever Latin man-.

chondra chondrocranium (cartilage skull of embryo—493)-
costa intercostal muscles (between the ribs).
crania cranial surgery.
cysti cystitis (inflammation of bladder).
cyti cytology (study of cells—289); erythrocyte (353)-
dactyli pentadactyl (31); polydactyly (16).
denti dentist.
dermi dermis; epidermis (82); dermatitis.
entera enteron (international synonym).
facia facial.
feci or faeces; defecate.
copra coprophilia (355)-
gasti gastric; gastritis; gastronomic (324).
glandi gland.
glena glenoid (socket of jaw).
glossa hypoglossal nerve (85); glossary; polyglot (16);' Inter-
glossa (87).
glutea or gluteal muscle (of rump).
pygea pygeal (of rump of bird).
gnatha agnathous (without jaws, like lampreys and hags,see 528); gnathostomata (vertebrates with jaws, in contra-
distinction to cyclostomata—528).
haema haemoglobin (red blood pigment of the erythroid cytes—216); haemal, and all other international technical terms referring to blood.
hepa hepatic (of the liver).
kera keratin (horn protein); rhinoceros (horney snout).
cornua bicornuate (of a two-horned uterus, e.g. of dog or rat); cornucopia (horn of plenty); tricorn(three-cornered hat).
labi labial.
lacrima lachrymose; lachrymal.
(517) lacti lactic acid; lactose (milk sugar); lacteal (of tubules of the breast); lactation.

(518) lana or eri In a few zoological terms, e.g. lanate (woolly); lanolin (wool grease), Common in international zoological and botanical names of woolly creatures.

(519) lepidi lepidoptera (butterflies and moths, because of the fine-coloured scales on the wings—537).

(520) lipi or stea lipoid (fat); lipolysis (fat-splitting—293); lipase (fat-splitting enzyme), stearin (mutton fat); stearic acid.

(521) lophi lophodont (type of molar teeth with ridges characteristic of vegetarian mammals such as horse, cow, rabbit).

(522) nari narial; nares (nostrils).

(523) nasi nasal.

(524) nephri or nephritis (inflammation of kidneys).

(525) rena renal.

(526) oculi oculomotor muscles (of eye socket); oculist.

(527) oesophagi oesophagus; oesophageal.

(528) ora or oral; aboral.

(529) ostea osteology; periosteum (tissue around bone).

(530) ostraca or Common in sub-classes of Crustacea, e.g. malacostraca (crabs, shrimps, etc.), ostracoda, etc.

(531) oti otic; periotic (bone enclosing inner ear—96); otitis.

(532) ova International biological term (plural form)*

(533) pedi pedal; pedestrian; biped.

(534) pelvi or pedis.

(535) pinna pinnate (of feathery leaves like those of mimosa).

(536) poda In international biological terms the Latin root ped- stands for foot, but the equivalent Greek pod- for limb, e.g. arthropoda (484); isopoda (wood lice—44); brachiopoda (lamp shells—484); gastropoda (snails, limpets—506).
(537) **pteri**  Usual root, e.g. **chiroptera** (537) and insect orders, e.g. **lepidoptera** (519); **coleoptera** (745); **orthoptera** (grasshoppers—336); **dip-tera** (flies).

(538) **pulmoni** pulmonary, (lung) tuberculosis.

(539) **sarca or sarcolemma** (sheath of muscle fibre); **sarcolactic** acid (lactic acid in muscles). **mya** myomere (19) or myotome (segmental muscles of fish or human embryo); myonemal junction of nerve and muscle (525).

(540) **scapa** Abbreviation for scapula, shoulder-blade.

(541) **soma or somatic; chromosome** (175).

(542) **corpora corpora** or **corporal**.

(543) **sudori** sudoriferous glands (= sweat glands).

(544) **tarsi or tarsus** (ankle).

(545) **thela or thelin** (hormone activating milk secretion).

(546) **villi** Anatom, term for minute papillae on inner wall of gut.

(547) **thoraci** thoracic.

(548) **tricha or atrichous** (bald); **trichogyne** (filamentous female organ of some algae), **capilli** capillary.

(549) **ungua ungulata** (hoofed mammals).

(550) **ura or cynosure** (original meaning pole star in tail of Little Bear, hence focus of attraction); **uro pods** {tail fan of lobster—536}; **urostyle** (fused tail vertebrae of frog), **cauda** caudal.

(551) **acantha or hexacanth** (6-hooked) embryo of tapeworm (32); acanthocarpus (with prickly fruit like horse-chestnut—566).

(552) **echini** echinus (sea-urchin—covered with spines); echinodermata (sea-urchins, starfishes, with a spiny skin—502).

Where the name of an animal or plant is based on the international binomial epithet, an asterisk follows it.

(553) **amygda amygdalus communis**.

(554) **ana anatidae** (duck family).

(555) **ansi anserinae** (goose sub-family of above).

(556) **api api** (bee genus); **apiary; apiculture** (192).

(557) **avi aves** (birds); **aviary**.

(558) **bovi bovidae** {cattle family}; **bovine; Bovril**.
A sponge is a porous structure, most of the solid part (top figure) being a non-cellular (43) jelly, the mesenchyme (92) (569), strengthened by horny fibres and spicules of silica (661) or calcareous crystals (793) secreted by cells embedded therein. Minute pores in the dermal (501) layer lead into the incurrent canals (86) (206) (636). Water circulating continuously in the latter emerges by the large orifices (528) of the excurrent canals (83) (206) (636). Its motion is due to cells lining the flagellated chambers (233) (47) which link the incurrent and excurrent systems (433). The left bottom figure of a single flagellated chamber shows the collar cells or choanocytes (678) (499) whose vibratile flagellae (453) (233) flick the water from the afferent (76) to the efferent (83) aperture called the apopyle (78) (383). The apopyle is the perforation (383) through which the water flows away. In the mesenchyme between this flagellated chamber and its neighbour we see a crystalline spicule still attached to the scleroblast (410) (162), i.e. cell which buds off hard material. The bath sponge has horny fibres but no skeletal (715) spicules; but most other sponges have them. Those of different species are of various shapes, the simplest or mon-axon (27) (736) type having a single axis. The bottom right-hand figure is a microscopic (23) (411) view of a single choanocyte with its cuticular collar around the base of the flagellum, whose whip-like motion (475) maintains the circulation of water containing food particles.
The Sponge

FLAGELLATED CHAMBER

AFFECTENT aperture  APOLYCLE

MESENCHYME

SCLEROBLAST MONAXON

Single collar cell or CHOANCYTE

FLAGELLUM

Cellar

Pore of INCURRENT CANAL

Pore of EXCURRENT CANAL
UN ANTHROPI ACTE PHAGO
U GYNA ACTE PER CTENI

UN ERYTHRO GYNA ACTE SCHOLO DE GEO PLUS HELI
AD MELANO MICRO ANTHROPI
U MELANO MICRO ANTHROPI GENE SCHOLO DE GEO PLUS HELI
EX UN ERYTHRO GYNA

U GEO KINE PERI HELI
LEARNING BY EYE
In TWELVE charts such as this one it is possible to exhibit the meanings of the 385 substantives which make up nearly half of the essential word list.
LEARNING BY EYE

Because Interglossa resembles Chinese languages in having no dead affixes or flexions, it is able to exploit a technique of instruction specially adapted to the needs of children and of pre-literate peoples as yet outside the pale of civilization. The meaning of each vocable becomes explicit through the medium of visual aids. Starting with familiar objects, colours and numbers (Chart i), we have no difficulty in presenting the basic time markers which do all the work of a tense system (Chart 2), or the articles which do the work of number flexions (Chart 4). We add to our vocabulary for picturable objects pari passu in a few charts like Chart 5, showing the abstract relations of space, or, like Charts 10 and 11, displaying the meaning of the twenty operative words which, in combination with such abstractions and names of qualities, do all the work of hundreds of verbs in an Aryan language. Three of out charts, respectively showing a flower, the human ear and the structure of a sponge, are here to remind us of another fact relevant to the teacher’s task. Any page of a high-school text-book of science teems with truly international words which furnish the bricks of our list of about 900 essential vocables.
bryophyta (mosses and liverworts—604).
bulb.
camelidae (camel family).
cannabis sativa.*
Zodiacal constellation of the Crab (Cancer).
canidae (dog family); canine.
This is the international root for the various tribes of shrimps and their allies, e.g. pericarida; hoplocarida; syncarida, etc.

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cauliflower.
cervidae (deer family).
parenchyma (juicy core of stem).
citrus (lemon genus); citron; citric acid.
International name for the sound-box of the internal ear, because coiled like a snail’s shell.
cocos nucifera.*
conifers.
cucurbitaceae (squash family, i.e. marrows and cucumbers).
cygnus (swan genus).
dendrite (branching process of nerve cell); many generic names, e.g. lepidodendron (fossil tree fern with scaly bark—519).
elephantidae family).
equidae (horse family).
vicia faba.*
felis domesticus *; feline.
filices (fern tribe).
floral.
(form one genus of ants); formic acid.
gallus domesticus.*
(glume (botanica1 name for chaff).
gossypium (cotton genus).
graminaceae (grass family); graminivorous.
clupea harengus.*
(homarus (one genus of lobster).
(590) homini hominidae (including besides, homo sapiens fossil species of homo, e.g. homo neanderthalensis, and the genera eoa nthropus, Pilt- down Man, sinanthropus, Peking Man, and J pithecanthropus, the Java Ape Man).

(591) hordea hordeum (barley genus).

(592) latici latex (milky fluid in the stems of lettuce, sunspurge, dandelion—rubber is made from latex of, various plants, formed in laticiferous cells).

(593) legumi legummosae.

(594) lepi lepus (hare genus).

(595) lina linaceae (flax family).

(596) lupi canis lupus *; lupine.

(597) muri muridae (mouse-rat family).

(598) orangi This form has wide international currency through commerce.

(599) ovi ovis (sheep genus).

(600) panica panicum (millet genus).

(601) persica amygdalis persica.*

(602) phoeni phoenix dactylifera.*

(603) phylla mesophyll (internal tissue of leaves); phylloclade (leaf-like stem); chlorophyll (green pigment of leaves—171).

(604) phyta phytology (syn. botany); bryophyta (559); spermatophyta (seed plants—619).

(605) pisa pisum (pea genus).

(606) pisci pisces; piscine.

, (607) pomi pome (botanical term for fruit like apples).

(608) potati This is of wide international currency through commerce.

(609) pruni prunus (plum genus).

(610) pyri pyrus (pear genus).

(611) rami ramification; biramus (with two branches).

(612) rhabdi rhabdite (roaMike bodies in cells, especially of skin of flat worms).

(613) rhiza rhizostome (underground roof-like stem); rhizoids (root hairs); mycorrhizae (symbiotic fungi associated with roots of grasses and other plants).

(614) salmi salmo (salmon genus).

(615) sardini clupea sardinus.*
(616) secala secale cerealae.*
(617) selachi selachii (class name of sharks, skates, rays). 
(618) simi simiidae (ape family).
(619) sperma spermatophyta (seed plants, i.e. conifers and angiosperms—604); angiosperm (flowering plants so-called because the seeds are in a closed ovary —175); endosperm (food store inside seed); sperm (male gametes of seminal fluid, or seed of Bible English).
(620) suberi suberin (cork cellulose); suberose.
(621) sui suina (pig tribe); suidae (pig family).
(622) syca or sycosis (barber’s itch—a fig-like ulcer); sycophant (original meaning—informer against plunder of sacred fig-trees), fici based on the fig genus, ficus.
(623) tabaca or Widerly current through commerce, nicoti nicotiana (genus of tobacco plant).
(624) tomati Widely current through commerce, from Mexican Indian tomatl.
(625) tritica triticum (wheat genus).
(626) vermi or vermiform appendix (usually called appendix) of intestine, so called because worm-shaped; vermicide (worm-killer), helminthi helminthology (study of parasitic worms—288); anthelminthic (purge to cure ?*ww-infection—103); platyhelminthes (flat worms, e.g. liver fluke of sheep, or tape-worm—363).
(627) vespi vespa (wasp genus); vespiary (a wasps’ nest, cf. apiary—553, and aviary—555)*
(628) viti vitis vinifera.*
(629) vulpi canis vulpus *; vulpine.
(630) zoa zoologist (288); zoophilist (animal lover, all too often a misanthrope—354); protozoa, bryozoa, and many other zoological classificatory terms given on pp. 82-89. (631) agri agriculture (191); agronomy (324).
(632) alluvia alluvial deposits.
(633) astra / astronomy (324); astrology (288); asteroid; astroidea (star-fishes).
(634) asyla asylum.
(635) baia bay.
(636) canali canal.
(637) carta cartography (240).
(638) clima or climate.
meteori meteorology (288).
(639) continenti continental
(640) cosmi cosmopolitan; cosmography (249).
(641) deserta desert.
(642) detriti detritus (geological term for muddy deposits).
(643) farina farinaceous"; > farina itself is the old name for pollen.
(644) fonta fountain; font.
(645) geo geography (249); geocentric (706); geology (288); geodesy.
(646) heli heliocentric (706); heliotropism (441) helium (recognized to exist by lines in sun's spectra before its discovery on earth); heliography (sun- mirror signalling—249).
(647) horti horticulture (191).
(648) limni limnology (branch of ecology—208—dealing with life in lakes—288).
(649) luna lunar.
(650) mari mariner; maritime.
(651) mina mine.
(652) monti mountain; Mont Blanc.
(653) muci mucus (phlegm).
(654) nesia Polynesia (16); micronesia (23); melanesia (299)-
(655) nebuli nebulous.
(656) nephela nephelometer (114); nephology (288).
(657) oceani ocean.
(658) phrea Some international zoological names, e.g. a well- shrimp, phreatocus; phreatic.
(659) potami Mesopotamia (mid-region between rivers Tigris and Euphrates—91); hippopotamus (river- horse, cf. hippodrome—205).
(660) rura rural.
(661) sili From silica (p. 232), chief constituent of sand.
(662) spectra spectrum (artificial rainbow); spectral; spectro scope (410).
(663) terra terrestrial; subterranean.
(664) tunnel or tunnel.

glypha tyroglphe (mites which tunnel in cheese); siphonoglyph (ciliated tunnel fringing the gullet of sea-anemones and corals for sucking in food—417). The original Greek verb means both to hollow out (i.e. tunnel) or to engrave, hence hi-eroglyph or priestly engraving, cf. hierarchy (priestly authority—153).

(665) urani ataman; uranus; uranium.

(666) urba urban.

(667) valli valley.

(668) via via; viaduct.

(669) ampulla or International anatomical term for flask-like bases of semicircular canals of internal ear, and for other flask-like sense organs,

asfci ascus is the international botanical name for the flask-like vessel which contains the spores of certain fungi, e.g. Ergot. This group of fungi is called the ascomycetes.

(670) amyla amylase (stofcfc-splitting enzyme, e.g. of saliva, pancreatic juice or malt extract).

(671) bursa or bursar (man with the money bag); various biological names, e.g. bursa pastoris (shepherd’s purse).

sacci sac; saccus (sound bag of internal ear).

(672) butyri butyrin (butter fat); butyric acid (which gives stench to rancid butter).

(673) caca theobroma cacao * (from Mexican Indian kakantl).

(674)cafa cafe.

(675)calyci calyx (sepals of flower often form a cup hence so called) ; chalice.

(676) campani campanology; campanulaceae (an order of flowers which includes the harefoil, Canterbury bells, etc.).

(677)casea casein (cheese protein used for manufacture of some plastics).

(678) choani choanocytes (flagellated cells with membraneous collar lining the canals of sponges—497); choanoflagellata (micro-organisms like the collar cells of sponges—232).

(679) clinica clinic (a place to decide hospital bed-worthiness of patient); clinical thermometer (thermometer for use in bed).

(680) confecti confectionery. *
(681) corona  *coronation; coronet.*
(682) crea or *creat in* (a nitrogenous constituent of *meat extract*)  *creodont* (early *meat-eating mammals, including the sabre-toothed tiger*), *carni carnivora* (*flesh-eating mammals*).
(683) geli  *gel* (international technical term for *jelly*); hence *hydrogel* (262), etc.
(684) marsupiamarsupiaiaia (mammals like the kangaroo which carry their young in a *pocket of skin*).
(685) mitra  *mitre*.
(686) olea  *oleaginous; oleic acid* (from lipolysis of *olive oil*).
(687) pani The *Oxford Dictionary* and Webster’s both give *panification* as a name for *bread-making*, but do not state who uses it or where. A happy association for those who do not know a Romance language is *panica* (598), because millet was probably the first cereal used by mankind for *bread-making*. This is admittedly a poor root, but anyone who knows any French will recognize it in *pain*.
(688) placa From Latin *placenta*, now international biological term for the afterbirth, which is cake-shaped.
(689) pulvini *pulvinus* (little *cushion* or pad at base of leaf stalk) ; *pulvinate* (architectural term for *cushion-like projection*).
(690) sacari *saccharine*.
(691) sedi *sedentary*.
(692) spiriti *spirits*.
(693) strata *stratification* (arrangement of rocks in shelf-like layers, or process of forming same); *stratigraphy* (249); *stratum* (layer or *shelf* of earth's crust) ; *stratosphere* (top *shelf* of atmosphere).
(694) supa *soup; sup.*
(695) tapea *tapestry*.
(696) tea *thea sinensis.*
(697) testa International term for *seed-coat*.
(698) theca By itself international term for spore-box ; *thecate* (of *boxed-in* structures); as suffix this root occurs in many words for thecate organs.
(699) **toga or pallia** Loose Roman outer garment.

International zoological name (plural form) for the mantle that lines the shell or *tunic* of molluscs or *Tunicula* (701).

(700) **trapeza** *trapezium* (geometrical term).

(701) **tunica tunicata** or sea-squids, near-allies of Vertebrates, with a tadpole-like larva, settle down to a sedentary adult life, enclosed in a *tunic* of cellulose.

(702) **vini** *vine; wine; vinometer* (for measuring alcohol content of wine—114) ; *vinegar*.

(703) **amorphi** amorphous.

(704) **atria** *atrium* (*outer chamber*) into which water flows from the gills of *Tunicates* (701) and *Amphioxus*.

(705) **balconi** *balcony*.

(706) **centra** centre; heliocentric (606) ; *geocentric* (645).

(707) **cera** ceramics (making of pottery or *tiles*).

(708) **columni** column.

(709) **coni** conical.

(710) **cruci** crucify; cruciform.

(711) **cuba** cube.

(712) **cycli** cyclical; *cyclometer* (114).

(713) **cylindri** cylindrical.

(714) **fenestra** fenestrated (of membranes with windows) ; *fenestra rotunda* and *fenestra ovale* are the two windows in the periotic bone which invests the internal ear.

(715) **fossa** fossorial (of burrowing animals) ; *fosse*.

(716) **grami** gram.

(717) **lampa** lamp.

(718) **litri** litre.

(719) **metri** metre.

(720) **mura or septa** septum, international technical term for *partition*.

(721) **ponti** pontoon; *pons varoli* (region forming a bridge between the brain and spinal cord).

(722) **porta** portal; portcullis; portico.

(723) **prisma** prismatic.

(724) **prosceni** proscenium.

(725) **pyrami** pyramid.

(726) **quadra** quadratic; quadrangle.
(727) recessi recess.
(728) scala scale (marked off in steps).
(729) skeleta skeleton; skeletal.
(730) sphaera sphere; hemisphere.
(731) tecti tectorial; sempervivum tectorum (house-leek which grows on roofs).
(732) tubi tube; tubiferous; tubicoles.
(733) acu aculeate (possessing a sting or prickle, i.e. an anatomical pin).
(734) ara arable.
(735) artilleri artillery.
(736) axi axis.
(737) baci bacillus (so-called because it is rod-shaped); hence bacilliform.
(738) blada blade.
(739) bomba bomb.
(740) cardo International zoological name for hinge of shells of bivalves, e.g. oyster.
(741) catena catenary (curve which follows the line of chain attached by both ends at same level).
(742) clavi clavichord (early stringed instrument with keys).
(743) cleidi A cleidoic egg is an egg locked in a shell which protects it against water loss.
(744) colea coleoptera (535) beetles, so-called because forewings form a hard sheath for hind ones.
(745) copa In international zoological names of many swimming animals with <w-like limbs, e.g. copepoda (534), small shrimps abundant in surface layers of sea, chief food of herrings.
(746) copula copula (grammatical term for be as link between topic and attribute) ; copulation.
(747)coryna In many international zoological names, e.g. corynidae, a family of polyps with club-shaped tentacles.
(748)cteni or etenidia (comb-like gills of molluscs); ctenophora (comb jellies—jellyfish with comb-like ciliated ridges for swimming—357); ctenoid scales of fishes have comb-like ridges.
pectini pectinate; pecten (the scallop) has a shell with comb-like ridges.
(749) dentili or This is suggested by the tooth-like nature of a saw, and is artificial.

dentili or

trepana Surgical saw, hence trepanning of skull by early peoples.

trepana

disca disc.

disca

elasti elastic; elasticity.

elasti

falci falciform (hook-like); falcon (with hook-like or sickle-like beak).

falci

furca International zoological name for forked tail processes of insects, e.g. earwig.

furca

gladi gladiator; gladiolus (so-called because of shape of leaves).

gladi

helica helicopter (535).

helica

inci The incus is the anvil, base of the three ear ossicles which connect the eardrum (tympanum) with the internal ear.

inci

lamina International term with same general meaning; hence laminated (of material which peels off in sheets, e.g. slate).

lamina

lancea lancet; lanceolate (of leaves).

lancea

lyra lyre.

lyra

machiina machine.

machiina

mallea The malleus is the outermost hammer-shaped bone of the three ear ossicles lying against the eardrum and articulating with the incus.

mallea

mimi mime; mimicry.

mimi

missili missile.

missili

navi navy; naval.

navi

occlu occlude (a burr or nut occludes by action of the screw or bolt).

occlu

pelecypoda (bivalve molluscs, so called because of the axe-like locomotory organ—536).

pelecypoda

penna pen.

penna

pista piston.

pista

reti reticulate.

reti

rota rotary.

rota

sagitta The zodiacal constellation sagittarius (the Archer) ; sagittate (of arrow-like leaves).

sagitta
(772) **scuta or** International zoological name for hard shield-like integument of segments of insects, aspi In names of many fossil fishes with a head shield, e.g. **cephalaspis**, one of the earliest known vertebrates.

(773) **seta** International zoological term for bristles of worms, and insects.

(774) **signa** signal; ensign.

(775) **spatula** spatulate.

(776) **sphena** Common root in international anatomical terms for wedge-like processes and bones, e.g. **alisphenoid** and **basisphenoid** bones of skull; **zygasphene** (wedge-like processes peculiar to snake’s vertebrae); **sphenodon**, nearly extinct New Zealand lizard, a lone survivor of a Coal Age class of reptiles with wedge-like teeth.

(777) **stapi** The **stapes** is the innermost of the three ear ossicles (so-called because like a stirrup).

(778) **syringi** syrinx (voice-box of birds, responsible for flute-like notes of same).

(779) **taxi** taxi.

(780) **tympana** tympanum (ear-drum).

(781) **vagoni** Thomas Cook and Son Wagons-lits the world over; our word wagon.

(782) **vecti** vector (magnitude with specified direction—the action of the lever depends on the equilibrium of two vector magnitudes).

(783) **vela** velar; vel is the common international root in names for organisms which float with the wind by a sail-like projection, e.g. veliger; velella.

(784) **acidi** acid.

(785) **anthraci** anthracite.

(786) **argenta** argent.

(787) **aura** aurum (international name for gold).

(788) **carba** carbon.

(789) **cigara** cigar.

(790) **cigaretta** cigarette.

(791) **colla** colloid (international chemical term—originally for gluish residues), and in several international biological terms such as collenchyma, a tissue of sponges, so-called because its cells are glued together at the edges.
(792) creia  cretaceous (—chalk) age, when the great reptiles flourished.
(793) crystali  crystalline.
(794) cupra  cupric; cuprous.
(795) ferra  ferric; ferrous; jfem>concrete.
(796) gasi  gas.  
(797) halı  halogen (salt-making) family of elements—chlorine, iodine, etc.
(798) margara  In the Christian name Margaret; the pearl oyster is ostrea margarifera.
(799) metali  metallic.
(800) papyri  papyrus; paper.
(801) petrolea  petroleum.
(802) plasti  plastic.
(803) plumba  plumbum (international chemical term for lead).
(804) saponi  saponification (break-down of fat by alkali, originally in soap-making).
(805) sepi  International zoological name for the cuttle-fish, which exudes a cloud of ink when disturbed.
(806) stanna  stannum (International chemical term for tin).
(807) sulphı  sulphide.
(808) vitri  vitreous.
(809) agenda  Widely current with same meaning.
(810) anthropi  anthropology (288); philanthropy (354); misanthrope (305).
(811) arma  armaments; army; armour.
(812) arti  artistic; art.
(813) banca  bank.
(814) bibli  Bible; bibliography (249); bibliophile (354).
(815) billeta  Internationally widespread word for ticket (Russian, French, Swedish, etc.).
(816) bureau  Widely current with the same meaning.
(817) capitali  capitalist; capital.
(818) capitula  chapter is a corruption of the Latin word.
(819) caps  capsule; encapsulate.
(820) christi  Christian.
(821) classi  classify; class.
(822) coloni  colonial.
(823) commisari  commissariat; commissary.
(824) comita  committee.
(825) compani  company.
(826) crati  autocratic (9); democratic (197); plutocratic (366); theocratic (435).
(827) data  Widely current with the same meaning.
(828) discipuli  disciple.
(829) famili  family; familial.
(830) fili  filial; F.I (first filial generation—international genetic symbol).
(831) formula  Widely current with the same meaning.
(832) gazeta or  Both have wide international currency, journali
(833) gramma  .telegram (99); cryptogram (190); anagram; cablegram; gramophone (356).
(834) gyna  misogynist (305); gynaecology (288); polygyny (16); protogynous (of flowers with female parts which ripen first—139).
(835) infanti  infantile.
(836) imperia  imperial,
(837) industri  industrial.
(838) musea  museum.
(839) nota or  A bill is a note of what one owes.
(840) parenta  parental.
(841) poeti  poetic.
(842) politica  political.
(843) polizi  police.
(844) posta  postal.
(845) proletari  proletariat.
(846) propaganda  Widely current with the same meaning.
(847) propriæ  expropriate.
(848) prosa  prosaic; prose.
(849) regi  regicide; regal.
(850) rentieri  rentier.
(851)sacramenta  A sacrament is a ritual act of a sacred character, in so far comparable to the Roman Sacramentum or military oath.
(852) scientia  scientific.
(853) secretari  secretarial.
In the international terminology of genetics sib stands for brother or sister and is derived from the equivalent Old English sibbling. This Teutonic root is still alive in Scottish dialects, where a sibman is a near relation, and sibness means relationship.

widely current with the same meaning.

widely current with the same meaning.

theme; thematic.

university.

widely current with the same meaning.

verbal.

cambist (expert on bills of exchange); cambium (layer of stem or roots where cells exchange function of multiplying for that of protection or transport of sap).

charity; charitable.

patricide; regicide; infanticide; fratricide

concession (lease of mines, land, etc.).

diffusion; diffusible.

flexion; flexible.

foramina (openings for nerves in skull or vertebrae).

idiomsyncrasy; idiopathic; idiom.

massage.

Many zoological names, e.g. of water boatman

(notonecta), a pond bug which swims on its back.

perplexity.

confusion.

universal.

utilization.

carton.

corpuscle; corpuscular.

(glacial (ice) epoch; glacier; glaciatio

organ; organic; organization.

(alchemical fire principle, supposed to escape during burning),

lucifer.

muscles of stomach, anus, etc., acting as taps for gut,

unit.
APPENDIX

Two other specimens of translation from English into Interglossa here follow. The first is based on the original text of the Unanimous Declaration of the Thirteen United States in America. The second follows that of the Declaration of the Rights of Man and of Citizens by the National Assembly of France, as rendered in Postgate’s Revolution from 1789 to 1896.

U Manifesto e mono Voco de mono tri ge zygo Natio in America


Na esthe credo ; plu para Nomo habe phanero Verito. Chron u Proto, pan Homini habe iso. U Theo date a singulo Homini plu no-verso Privilegio, cleisto de Bio, cleisto de Libero, cleisto de tentato gene hedo. Plu Homini acte societo plu Crati tendo un Immuno de plu iso Privilegio ; plus pan Crati debito gene archo e Volo de Demo. Postulo u Crati non acte harmono plu para Tendo ; u Demo debito acte per Privilegio allo de Muto allo de Necro Re. Post Re, Mu debito acte societo u neo Crati harmono plu para Nomo syn plu geno de Archo; su pheno date offero de Immuno plus de Hedo syn maxima Fortuno.

Harmono u Sapio de pre Accido, u Sopho acte inhibito u Muto de Crati, mega tem ge revero, causo plu no-gravo plus no-duro Baso. Tem Mu poto acte tolero vice acte necro plu societo Organa ; su non habe alieno ; plu Homini duro esthe algo. Anti Re, Mu perimito balle, plus Mu debito balle, apo Mu u Crati; plus Mu debito acte societo plu neo Geno de Immuno ; chron u longo Serio de Oppresso syn Clepto tendo morid Sequo date digito u Viro de Helo. Minus Protesto, plu para Coloni pre acte tolero major de satio Tem. Na nu neccesso gene u neo geno de Crati.

(Here follows the list of grievances.)
**Manifesto de Privilegio de Demo syn Homini e natio Commita de France**

U No-sapio de plu Privilegio de Homini, plus Non-activo pro Mu, plus Arrogo anti Mu, eque solo Proto de communo


(1) Chron u Nato, plu Homini habe iso ; plus Mu duro habe libero plus iso de Privilegio/ Causo Re, zero Functio no- -cleisto u communo Functio debito date normo de plu hetero Ordino de plu Persona.

(2) U Tendo de pan politica Organa eque un Immuno pro plu no-verso Privilegio de Homini, harmono plu Nomo de Cosmi. Plu para Privilegio eque u Libero, u Propria, un Immuno plus u Resisto de Oppresso.

(3) U Demo debito eque u Proto de holo Archo. Zero Persona, zero Fascio de Persona, debito habe archo ex hetero Baso.

(4) U politica Libero eque u Privilegio de singulo geno de Acte; su no stimule nocuo de plu residuo Persona. Solo Limito de debito Utilo de Privilegio de singulo Homini eque u Necesso de tene Immuno plu iso Privilegio de singulo residuo Persona. U Lego debito acte limito plu Privilegio de Persona harmono u para Nomo.

(5) U Lego debito dicte impero anti zero geno de Acte no-cleisto un Acte antiGrego. Plu Persona no debito acte inhibito Recipro no-cleisto chron u Lego dicte impero anti plu iso Acte. Minus Impero de LegQ, zero Persona debito acte caugo u DynQ.

(6) U Lego dicte volo de Grego. allo Auto allo per Electio-pe, singulo Natio-pe debito habe Priviiegio de Electio de plu neo Lego.
Cleisto de Profito cleisto de Peno, u Lego debito acte per iso Metodo
de singulo Persona. Causo u Lego acte de singulo Persona per iso Metodo;
singulo Pe debito habe iso occasio de Ergo plus de Ordino plus de
Laudo harmono plu idio Poto de Auto minus Hetero no-cleisto harmono
plu Experto plus eu Qualito de Auto.

(7) Minus Archo de Lego minus Methodo harmono Re, zero Homini
debito gene aetio, zero Homini deibo gene captivo zero Homini deibo
duro habe eco Peno-do. Plu Persona: su acte catalyso, allo dicte petitio
allo acte harmono, plu Impero minus Archo de Lego; deibo gene peno.
Chron u Lego dicte impero de Captivo allo acte captivo u Natio-pe; un
iso Persona deibo reacte impero minus Attendo minus Resisto.

(8) U Lego no deibo acte peno major de phanero Necesso. Zero
Persona deibo gene peno no-cleisto harmono u Lego, ge publico pre
Mal-acte, plu harmono u Methodo de Lego.

(9) U Lego deibo acte harmono u Postulo de Non-aetio pre Judico
anti; plus deibo acte minus Severo major de Necesso tendo u tene ge
captivo un iso Persona pre Judico.

(10) Chron u Publico de Credo, cleisto religio Credo, non acte anti
u societo Organa, ge immuno e Lego; zero Homini deibo gene oppresso
causo un iso Credo.

(11) U Publico de Cogito plus Credo minus Inhibito eque u forto valo
Privilegio de Homini. Singulo Natio-pe permito dicte, singulo Natio-pe
permito acte grapho, singulo Natio-pe permito date publico auto Credo
conditio de acte per iso Libero harmono plu Limito de Lego.

(12) Un Arma syn Polizi necesso teni immuno plu Privilegio de
Homini cleisto Natio-pe. Plu para Organa de Dyno no deibo acte pro
idio Profito de plu Persona; su habe onero de Mu; vice pro Demo.

(13) U Crati necesso gene pecunio pro plu Organa de Dyno plus pro
plu hetero Onero per Fisco. Singulo Mero-pe de Natio necesso acte
pecunio harmono auto Poto.

(14) Allo per auto Voco allo per Voco de Electio-pe, singulo Natio-pe
debito habe privilegio de Judico de plu Fisco, cleisto de Summatio,
cleisto de persona Metro, cleisto de Functio de Duro.

(15) U Natio deibo habe occasio de Examino de plu Acte e singulo
Persona; su gene archo allo gene onero e Natio.
(16) U Demo; su non habe plu para Poto plus un iso Immuno de plu Privilegio ; debito gene u neo Systemo de Lego.

(17) U Privilegio de Propria habe hagio plus no-verso. Chron u para Privilegio non acte anti communo Necesso ge dicte per Lego ; zero Persona debito perde Re. Chron u Lego tracte u Propria apo Persona, u Lego debito acte pecunio de Re.
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