English in tiers

TOM McARTHUR

A look at the complex layering of the vocabulary that English has inherited from Germanic, Romance and Greek.

IN HIS preface to *A Dictionary of the English Language* in 1755, Samuel Johnson observed: 'The two languages from which our primitives have been derived are the *Roman* and the *Teutonick*: under the *Roman* I comprehend the *French* and provincial tongues; and under the *Teutonick* range the *Saxon*, *German*, and all their kindred dialects. Most of our polysyllables are *Roman*, and our words of one syllable are very often *Teutonick*.'

By the time Johnson made this statement, the vocabulary of English had more or less settled into the condition we know today. As a result, this quotation has the charm of archaism but otherwise states the obvious. If we go back a further hundred years or so, however, things are different. In the early 17th century, the makers of the first dictionaries of English were not like Johnson. His primary concern was the recording, defining, and where possible 'fixing' of existing words; theirs appears to have been the *making* and *making plain* of new words. They followed the 'ink-horn' pedants of the 16th century in using specific rules to process Latin words through French orthography into the vocabulary of English. And most of these 'hard words', as they called them, were indeed polysyllables.

Manufacturing words

In 1616 there appeared *The English Expositour*, compiled by John Bullokar. Among other things, Bullokar appears to have gone mechanically through Thomas Thomas's *Dictionarium linguae latinae et anglicanae* (1588 and 1606), adapting Thomas's Latin headwords into his own English headwords: *alacritas* into *alacritie*, *catalogus* into *catalogue*, *rumino* into *ruminate*. His justification was that others were already decanting Latin into English: 'it is familiar among our best writers to usurp strange words.' He felt free to usurp them too, in the conviction that the entire lexical resources of 'high' Latin were available to users of 'low' English, in order to raise it up (or, if you wish, 'elevate' it). Nor was he alone. During the approximate period 1550–1650 a vast number of Latinisms were deliberately transfused into English, just as today vast numbers of English words are moved into Malay and Japanese.

By the 19th century, this exotic 'Roman'

TOM McARTHUR was born in Glasgow in 1938. A graduate of both Glasgow and Edinburgh universities, he has been in turn an officer-instructor in the British Army, a school-teacher in the Midlands of England, Head of English at the Cathedral School, Bombay, organizer of courses for overseas students at the University of Edinburgh, and associate professor of English at the Université du Québec. He has written for The Birmingham Mail, The Times of India, and The Scotsman. His publications include the 'Longman Lexicon of Contemporary English,' 'A Foundation Course for Language Teachers,' 'The Written Word', the co-editing of 'Languages of Scotland', and 'Worlds of Reference'. He is married with three children.

vocabulary and the processes for adding to it had become so naturalized that purists like William Barnes, who wanted to reduce the load of Latin and restore the vigour of 'Saxon', received scant support: the Latin *omnibus* became the colloquial *bus*, and not Barnes's 'folkwain', and today the box in the corner of the room is not a Saxon 'far-sighter' but a Greco-Latin *television*. As a result, for people in the 20th century to be competent in English, they must be able to handle that dualism which Johnson called 'Roman' and 'Teutonick'. Of it, two observers have said:

○ 'English and French expressions [in English] may have similar denotations but slightly different connotations and associations. Generally the English words are stronger, more physical, and more human. We feel more at ease after getting a *hearty welcome* than after being granted a *cordial reception*. Compare *freedom* with *liberty*, *friendship* with *amity*, *kingship* with *royalty*, *holiness* with *sanctity*, *happiness* with *felicity*, *depth* with *profundity*, and *love* with *charity*' – Simeon Potter, in *Our Language* (1950/66).

○ 'Apparently the Elizabethans discovered the possibilities of etymological dissociation in language: *amatory* and *love*, *audition* and *hearing*, *hearty welcome* and *cordial reception*: these quasisynonyms offer new opportunities for semantic differentiation. Two terms for the same *denotatum*; new *connotations* can arise, stylistic, poetic possibilities are offered when the new word is liberated from the restricted use in the language of science' (Thomas Finkenstaedt, *Ordered Profusion*, 1973).

Bisociation

Johnson points to two general sources of vocabulary, while Potter and Finkenstaedt indicate some special relationships between specific pairs of words, one from each source. In the process, Potter talks about *association* (the closeness of the two kinds of usage) and Finkenstaedt about *dissociation* (the separateness of the two kinds of usage), a paradox that needs some attention. The words in the pairs are both alike and unlike: *audition* and *hearing* overlap semantically, but are worlds apart etymologically.

I would like to adapt the terms used by Potter and Finkenstaedt and call the relation-

ship between these pairs *bisociation*. The term is both general enough to include Johnson's categories, which I will call *Vernacular* and *Latinate*, and particular enough to cover the points of detail that Potter and Finkenstaedt discuss. In bisociate pairs like *freedom* and *liberty*, the relationships are semantically and stylistically parallel. This parallelism is apparent in such pairs as *sight/vision* and *go up/ascend* ('What a sight she looked as she went up to bed'; 'In his vision, she ascended into heaven'). It can even be turned to wry advantage in quips that turn the homely *wisecrack* into a *sagacious crevice*.

Bisociation is powerful in English, but not unique to it. Such lexical parallelism can occur when any vernacular language borrows so freely from a classical or other prestigious source that it gains a more or less well-defined additional stratum of vocabulary. It is noticeable in Persian, which has borrowed extensively from Arabic, and in Tamil, which has a special level drawn from Sanskrit. Latin, especially in its more recent stages, has drawn heavily on Greek, so that it too has bisociate pairs, such as *circumlocutio* and *periphrasis*, *coordinatio* and *parataxis*, *transformatio* and *metamorphosis*, *subordinatio* and *hypotaxis*.

Trisociation

Such Greco-Latin pairs, however, have also entered English, in which a *shift* (Anglo-Saxon) or a *change* (French) may be a *transformation* (Latin) or a *metamorphosis* (Greek). English would appear, therefore, to have more than the two great sources, streams or strata identified by Johnson. There is a vernacular stream that descends in the main from Anglo-Saxon and other Germanic sources, a Latinate stream, in which Latin and French are closely associated, and also a Greek stream that has for centuries been processed into English through Latin and French or in orthographic styles derived from these languages (see diagram).

This triple relationship is not so immediately obvious as the pairs on which Potter and Finkenstaedt commented. Nor have such streams been planned; even word-makers as bold as Bullokar would not have attempted anything so rash. Rather, like Topsy, the relationship just growed. It is particularly apparent in terms of bases ('roots'). For example, the free vernacular word *fire* has a

A flow-chart of Greek, Latin and French into English (from Tom McArthur, *Worlds of Reference*, 1986).
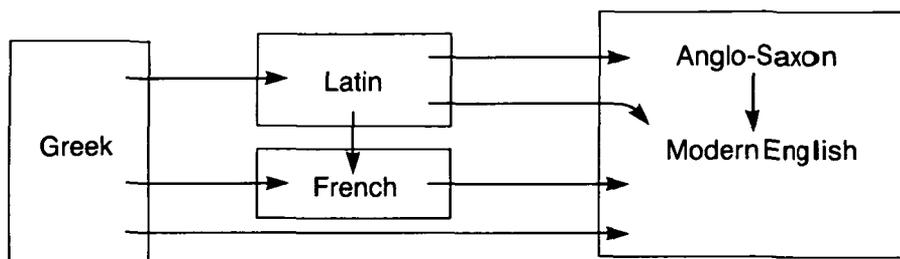
parallel bound Latin base *ign-* (as in *igneous* and *ignite*), and bound Greek base *pyr-* (as in *pyromania* and *pyrolatry*). Similarly, vernacular *bird* is matched by Latin *avi-* (as in *aviary*) and Greek *ornith-* (as in *ornithology*), and *earth* has *terr-* (as in *terrestrial*), and *ge-* (as in *geography*).

Much of the diversity, range, and quantity of English vocabulary arises from this complex condition, which I will call *trisociation*. To demonstrate the abundance, we can look at the 'triset' *ant, formic-, myrmec-*. The first member of the set, like *fire, bird*, and *earth*, is a free vernacular word, with such derivatives and compounds as *ant-eater, ant-like, ant-hill, driver ant, soldier ant, worker ant*. They are all relatively transparent: an *ant-eater* (whatever else it may be and do) eats ants; a *soldier ant* is likely to attack and defend (and contrasts with 'civilian ants' of some kind, which do not). The Latin base *formic-* occurs in *Formicidae* (the biological 'ant family'), and *formicarium* or *formicary* (an ant-hill or colony of ants). No one, however, normally makes the connection between the everyday *ant* and the technical *formic-* without help of some kind, and usually only a pedant would bring a formicary rather than an ant-hill into everyday chat. Finally, we have the Greek base *myrmec-*, found in such highly technical – even intimidating – words as *myrmecology* (the scientific study of ants), *myrmecophagous* (feeding on ants), and *myrmecophobia* (fear of ants).

This is only one among scores of trisets in English (see panels). In such sets, there seems to be a core of more or less accessible, more or less regular (even predictable) contrastive

material, and a periphery of irregular or etymologically more distant items. In the case of the ants, a literary-historical example of what lies at the periphery is Homer's *Myrmidons*, who 'swarmed like ants' as they followed Achilles into battle.

The three streams

As I indicated above, the vernacular members of such sets are mainly Germanic, but they are not exclusively so. For example, in addition to such Old English items as *house* and *home*, the vernacular includes *beef* from Old French *boef* (and therefore from Latin *bos/bovis*), as well as Old English *church* and Norse *kirk*, which are doublets descended from Greek *kyriakón*. Although language of origin is often a fundamental feature in the relationships among the streams of vocabulary, in many instances that source is so far removed in time that any associations with it are lost: no one save an etymologist thinks of *beef* and *church* as other than 'ordinary' words of English, functioning in 'ordinary' ways. The proof of this is the way in which such words form their derivatives: vernacular *beef* provides *beefy* and Latinate *bov-* provides *bovine*, and neither provides **beefal* (like *legal*), **beefine* (like *aquiline*), **bovish* (like *waspish*) and **bovy* (like *catty*).

This level includes the words that children tend to learn first but that foreigners may learn last, such as phrasal verbs: *do away with, do down, look down, look down on, make away with, put up with, shut up*. Most vernacular bases are free words and have many senses, such as *get*, whose main senses can be

Working in threes

Below are common trisets based on vernacular words beginning with *B*, *N* and *S*. In each set, the free word is followed by an associated base of Latin and Greek origin. Each set is followed by an example of how further forms are spun off from the primary elements.

bad, mal, caco   badly, malign, cacophony
be, ess, ont   being, essence, ontology
belly, ventr, gastr   potbellied, ventral, gastritis
best, optim, aristo   bestseller, optimal, aristocrat
big, magn, mega(lo)   bigheaded, magnitude, megalomania
bird, avi, ornitho   birdsong, aviary, ornithology
birth, nasc/nat, gen/gon   birthday, nascent/ native, genesis/cosmogony
black, nigr, melan   blacken, denigrate, melanin/melancholy
blood, sanguin, (h)aem(at)/(h)em(at)   bloody, sanguinary, an(a)emic
body, corp(or), som(at)   bodily, corporeal/ incorporate, psychosomatic
bone, oss(e), osteo   rawboned, osseous, osteopath
book, libr, biblio   bookish, library, bibliography
breast, mamm, mast   doublebreasted, mammography, mastitis

naked, nud(e), gymn   nakedness, nudity, gymnosophist

name, nomin, onom/onym   namely, nominate, onomastic/synonym
new, nov, neo   newness, innovate, neologism
night, noct, nyct   nightly, nocturnal, nyctalopia
nose, nas, rhin   nosiness, nasal, rhinitis

salt, sal, (h)al   salty, salinity, halophyte
say, dict, phas/phat   saying, dictum, emphasis
sea, mar, thalass   seascape, marine, thalassocracy
see, vid/vis, scop   all-seeing, evident/vision, telescope
self, ips, aut(o)   unselfish, solipsism, autistic
shape, form, morph   shapely, formal, metamorphosis
sharp, ac(u), oxy   sharpen, acute, oxygen
skin, cut(i), derm(at)   skinny, subcutaneous, dermatitis
sound, son, phon   soundless, sonic, telephone
speak, loqu/loc(ut), log   unspeakable, eloquent, dialog(ue)
stand, sta(t), stas/stat   outstanding, stable, stasis/static
star, stell, aster   starry, stellar, asteroid
stone, lapid, lith   stony, lapidary, megalithic
sun, sol, heli(o)   sunny, solar, heliograph

glossed as *become, grow, receive,* and *obtain.* Vernacular words also tend to be used informally, figuratively, and idiomatically, and to feature strongly in slang (*beef up, do for, get lost*) and do indeed, as Johnson noted, include many monosyllables.

The Latinate element tends to be cultural and technical, educational and commercial, and is used in written reports and formal discussions. In vernacular terms, its constituents are generally *bookish* and *high-brow* words. Some, often in more or less French-derived forms, operate on the everyday level (*agree, afford, receive, supply*), others have a more polysyllabic and technical vigour (*aggregate, arbitrary, collaboration, corroboration, disjunctive, pejorative*). Word elements on this level have cognates in the Romance languages, some of which are very similar in form and usage (such as French *civilisation*),

while others are *faux amis* whose forms may be close but whose meanings have moved elsewhere (such as French *déception*, which is a vernacular *let-down* or a Latinate *disappointment*, and has nothing to do with misleading people).

Material adapted from Greek into Latin, French, and English tends to be analytical and specialized, is not everyday usage except for specialists, and is common in such registers as medical and scientific English. The technical words of medicine are often swallowed whole, but can also be crudely but usefully glossed into more everyday English (the result often a Barnes-like Saxonism):

adenoma ('gland-thing') a tumour of glandular tissue
arthritis ('joint-condition') inflammation of the joints

cardiology ('heart-lore') the study of the heart

cardiopathy ('heart-feeling') disease of the heart

cytostomy ('cell-mouth') opening up an intercommunication between cells

hysterectomy ('womb-cutting-out') surgical excision of the uterus

necrosis ('state-of-death') localized death of tissue

osteopath ('bone-feeler') a manipulator of bones

phlebotomy ('vein-cutting') surgical incision into a vein

rhinoplasty ('nose-shaping') plastic surgery of the nose.

From plain to arcane

Robert Burchfield in his column 'Words and Meanings' (*Sunday Times*, 1 Apr 90) noted that 'It is easy enough to construct an English sentence in which all the words except articles and prepositions are of external origin, e.g. *Invading armies impose exotic political systems on conquered countries.* Or one in which every word is of native origin, e.g. *Hardly any horse-drawn ploughs are found on English fields now*' (my italics).

This is indeed relatively easy if one is in the business of words and has a sense of what constitutes 'internal' and 'external' sources. However, two writers at least, Victor Grove in *The Language Bar* (Routledge, 1950) and David Corson *The Lexical Bar* (Pergamon, 1985), have argued that for large numbers of users of English this kind of thing is not only far from easy but in their schooling they have had little help in crossing the 'bar' between the vernacular and the classical.

In the past, a classical education was the privileged norm. It was assumed that students from the 'right' backgrounds would acquire an understanding of, and some facility with, the elevated streams of English from Greek and Latin. Where the classical languages and the classics were less studied, or not so fully studied, lists of Latin and Greek elements have been provided in textbooks and dictionaries, and these have been more or less successfully assimilated and put to use.

The three levels can be syntactically distinctive (according usually to the registers being used), but generally they flow easily into one another in texts and conversations. The following set of sentences, however, each

From airy-fairy to the Atmos Clock
2

Below, the triset *air*, *aer-*, *atmo-* is shown with an expanded selection of derivatives, compounds, and fixed phrases that have been formed from it and are in regular use. The basic patterns found among the forms based on the triset are repeated in scores of such sets in English.

AIR   airy, airiness, airily, airy-fairy; airborne, airtight, airworthy; airbase, airbus, airflow, airline, airmail, airplane (AmE); air traffic control, Air Vice Marshal; Air Canada, British Airways, Loganair

aer(i), *aero-*   aerate, aeration, aerator; aerenchyma; aerial, aerialist, aerial mine, aerial survey, aerial tramway; aeriform; aerify; aerobatic, aerobatics; aeroballistics; aerobat, aerobatics; aerobic, aerobics, anaerobic; aerobiology; aeronaut, aeronautical; aeroplane (BrE), aerosol, aerospace, aerodynamics, aerothermodynamics; British Aerospace

atmo-   atmolysis; atmometer, atmometry; atmophile; atmosphere, atmospheric, atmospherics, atmospheric boundary layer, atmospheric braking, atmospheric electricity, atmospheric engine, atmospheric inversion, atmospheric pressure, atmospheric window; Atmos Clock

consisting of 20 words, indicates how density of Neo-Latinate content can affect the assimilation of information and alter the linguistic and social quality of that information:

(1) *20 words, all vernacular* The cunning old fox sat under the tree, waiting for the foolish crow to start singing and drop the cheese.

(2) *17 vernacular, 3 Latinate words* He picked up the gem, inspected it carefully, put it in his pocket, and escaped before anyone could stop him.

(3) *13 vernacular, 6 Latinate, 1 Greek* Most of the students who were involved in the project were enrolled for one semester in the world history course.

(4) *9 vernacular, 10 Latinate, 1 Greek* In order to test their hypothesis, the investigators conducted a series of complex experiments that were rigorously planned and executed.

(5) *7 vernacular, 9 Latinate, 4 Greek compounds* Abundant evidence exists, in both

histological and radiological terms, of increased osteoblastic and osteoclastic activity, as indicated by osseous rarefaction.

'Real' versions of this concocted sample can be found by ranging through from the general and children's sections in a library to such highly specialized sections as anthropology, biology, medicine, philosophy, and sociology. It is often not just the message of such sections that is hard to grasp, but the medium as well: many never get past the medium to find out whether the message is or is not relevant to their needs. Appropriate courses introducing the layers of the language at the right time and in manageable doses could help bridge the lexical gaps. ET

The Englist

In Santa Barbara, California, BEHZAD KASRAVI has recently developed a new kind of concordance-based glossary of English vocabulary, which he refers to as both the 'Englist' and the 'Dictionary Dictionary'.
The description that follows has been drawn from items of information which he has sent us:

● Language teachers know that the best way to learn a new term is to study it in context and in a group of related terms. For this reason, many dictionaries provide examples of how a word or an idiom is used in a phrase or a sentence. However, in one important area traditional alphabetical order has not been very helpful: all parts of an entry are not equally represented. For example, if an entry is a compound word or is prefixed, the first component or the prefix receives better treatment. You can look them up very readily, but the components in the middle and at the end do not do so well.

● The Englist uses a new method of alphabetizing words that helps solve these problems. Every part of every entry is equally represented and accessible. Every character of every entry is cross-referenced, and any entry can be located by looking up any portion of it. The CD-ROM version of the English provides very fast access and the hard copy print version is unique. Indeed, it serves as a kind of access dictionary to all other dictionaries of English, because it displays families of words together in unique clusters – whence the name *Dictionary Dictionary*.

● The system derives from a special kind of concordancing program in which entries are listed in horizontal rows across vertical columns, as in the following pages. The columns contain both character and symbol designations, the centre column serving as the *guide column*, down which one reads for the key elements of the glossary, as in:

        AN : ARCHY
       AUT : ARCHY
      HIER : ARCHY
    MATRI : ARCHY
      MON : ARCHY
      OLIG : ARCHY
     PATRI : ARCHY
              ARISTOCRACY
              AUTARCHY
              AUTOCRACY
  ARISTO : CRACY
   AUTO : CRACY
              etc.

There are no definitions or other matter, so that the list is not a dictionary in the common sense of the term. However, once a word has been found in the list, its meaning and use can be sought in a conventional work. Thus, if one is looking at a set of items in the *C* section, all of them sharing *CRACY* on the right-hand side of the guide column (as above), then any of the extensions on the left, such as *ARISTO, AUTO, BUREAU, DEMO, MOBO, PLUTO, TECHNO, THEO*, can provide a word that may be new or difficult, such as *THEOCRACY*. This word can then be checked in a Webster, a Collins, an Oxford, or other comparable work.

● In the master list, every entry appears as many times as it has characters, each time with a different character registered in the guide column. In this way, no shared element in a group of words is missed.

● Behzad Kasravi can be contacted at: Interbond, PO Box 5566, Santa Barbara, CA 93150-5566, USA.

access/time	bed:time	corpo:cracy
af:fix	belt	co:sign
a:flame	Bible/ Belt	Cotton/Belt
after:word	Cotton/ Belt	counter:culture
a:gnostic	green: belt	course
agri:culture	berry	con: course
air:time	black: berry	dis: course
a:lexia	blue: berry	race: course
al:locution	boysen: berry	re: course
a:moral	cran: berry	tele: course
ana:logue	dew: berry	water: course
an:archy	goose: berry	aristo: cracy
anti:pathy	huckle: berry	auto: cracy
any:time	mul: berry	bureau: cracy
a:pathy	rasp: berry	corpo: cracy
an: archy	straw: berry	demo: cracy
aut: archy	Bible/Belt	mobo: cracy
hier: archy	bi:cycle	pluto: cracy
matri: archy	black:berry	techno: cracy
mon: archy	blue:berry	theo: cracy
olig: archy	boysen:berry	cran:berry
patri: archy	broom:stick	cross:word
aristo:cracy	bureau:cracy	cruci:fix
a:scribe	by:word	culture
a:spire	camphor:ball	agri: culture
as:sign	candle:light	counter: culture
aut:archy	candle:stick	flori: culture
auto:cracy	cannon:ball	horti: culture
ball	carbon/paper	pisci: culture
base: ball	cata:logue	silvi: culture
basket: ball	catch:word	sub: culture
camphor: ball	CAT (scanner)	vini: culture
cannon: ball	chop:stick	viti: culture
corn: ball	chop:sticks	cycle
eye: ball	circum:locution	bi: cycle
fire: ball	circum:scribe	kilo: cycle
foot: ball	con: clude	mega: cycle
hand: ball	ex: clude	motor: cycle
high: ball	in: clude	re: cycle
meat: ball	oc: clude	tri: cycle
moth: ball	pre: clude	uni: cycle
pin: ball	se: clude	cyclopedia
racquet: ball	com:motion	en: cyclopedia
screw: ball	con:clude	day:light
snow: ball	con:course	day:time
soft: ball	con:form	Deca:logue
spit: ball	con:science	de:form
volley: ball	con:sign	demo:cracy
base:ball	con:spire	de:motion
basket:ball	corn:ball	de:scribe

de:sign	en: flame	in:flame
dew:berry	in: flame	in:flammable
dia:gnosis	flammable	in:scribe
dia:logue	in: flammable	in:signe
diesel/engine	non: flammable	in:spire
dis:course	flash:light	jet/engine
donkey/engine	flood:light	joy:stick
double-time	flori:culture	kaleido:scope
down:time	fluoro:scope	key:word
drum:stick	fly:paper	kilo:cycle
dust/storm	foot:ball	kine:scope
dys:lexia	fore:word	a: lexia
ec:logue	form	dys: lexia
electro:scope	con: form	lexicon
e:locution	de: form	life:time
e:migrate	micro: form	light
e:motion	multi: form	candle: light
em:pathy	pre: form	day: light
en:cyclopedia	re- form	fan: light
end/paper	re: form	fire: light
en:flame	trans: form	flash: light
engine	uni: form	flood: light
diesel/ engine	full-time	gas: light
donkey/ engine	gas/engine	head: light
fire/ engine	gas:light	high: light
gas/ engine	gnosis	lime: light
jet/ engine	dia: gnosis	moon: light
piston/ engine	pro: gnosis	pen: light
solar/ engine	gnostic	search: light
steam/ engine	a: gnostic	side: light
Wankel/ engine	goose:berry	sky: light
en:sign	green:belt	spot: light
epi:logue	Greenwich/Time	star: light
ex:clude	gyro:scope	stop: light
eye:ball	hail:storm	sun: light
fan:light	half:time	tail: light
fiddle:stick	hand:ball	torch: light
fiddle:sticks	head:light	twi: light
fire:ball	head:word	lime:light
fire/engine	hier:archy	lip:stick
fire:light	high:ball	local/time
fix	high:light	loco:motion
af: fix	horo:scope	locution
cruci: fix	horti:culture	al: locution
in: fix	huckle:berry	circum: locution
pre: fix	hygro:scope	e: locution
suf: fix	im:migrate	ana: logue
trans: fix	im:moral	cata: logue
flame	in:clude	Deca: logue
a: flame	in:fix	dia: logue

ec: logue	one:time	re:motion
epi: logue	ophthalmo:scope	re-sign
mono: logue	oscillo:scope	re:sign
pro: logue	over:time	re:spire
trave: logue	paper	re:word
long:time	carbon/ paper	sand:paper
lunch:time	end/ paper	sand:storm
mari:time	fly: paper	CAT (scanner)
matri:archy	news: paper	Computerized
meal:time	note: paper	Axial
mean:time	sand: paper	Tomography
meat:ball	wall: paper	MRI (scanner)
mega:cycle	waste: paper	Magnetic
micro:form	white/ paper	Resonance
micro:scope	part-time	Imaging
migrate	pass:word	PET (scanner)
e: migrate	pas:time	Position-
im: migrate	- pathy	Emission
mobo:cracy	a: pathy	Tomography
mon:archy	anti: pathy	science
mono:logue	em: pathy	con: science
moon:light	sym: pathy	pre: science
moral	patri:archy	scope
a: moral	peace:time	electro: scope
im: moral	pen:light	fluoro: scope
morale	peri:scope	gyro: scope
moth:ball	per:spire	horo: scope
motion	PET (scanner)	hygro: scope
com: motion	pin:ball	kaleido: scope
de: motion	pisci:culture	kine: scope
e: motion	piston/engine	micro: scope
loco: motion	pluto:cracy	ophthalmo: scope
pro: motion	pre:clude	oscillo: scope
re: motion	pre:fix	peri: scope
motor:cycle	pre:form	spectro: scope
MRI (scanner)	pre:science	stereo: scope
mul:berry	pre:scribe	stetho: scope
multi:form	pro:gnosis	strobo: scope
news:paper	pro:logue	tachisto: scope
night:time	pro:motion	tele: scope
night/stick	pro:scribe	ultramicro: scope
non:flammable	race:course	screw:ball
noon:time	racquet:ball	scribe
normal	rain:storm	a: scribe
ab: normal	rasp:berry	circum: scribe
sub: normal	real-time	de: scribe
normalcy	re:course	in: scribe
note:paper	re:cycle	pre: scribe
oc:clude	re-form	pro: scribe
olig:archy	re:form	sub: scribe