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labelling (*n.*) A term in GRAMMATICAL analysis for the explicit marking of the parts or stages in a STRUCTURAL analysis of a SENTENCE. For example, the main structural divisions in the sentence *People ran* can be signalled using such methods as BRACKETING or a TREE diagram, e.g. [[people] [ran]]; but this analysis is made more meaningful if a structural description is added (ASSIGNED) to the brackets through the use of **labels**, e.g. [[people]_N[ran]_V]_S where N = NOUN, V = VERB and S = sentence. Such a convention is known as a **labelled bracketing**. In a tree diagram NODES can be labelled similarly.

labial (*adj./n.*) A general term in the PHONETIC classification of speech sounds on the basis of their PLACE OF ARTICULATION: it refers to active use of one lip (as in LABIO-DENTAL sounds, such as [f]) or both lips (as in BILABIAL CONSONANTS, such as [b], or ROUNDED VOWELS, such as [u]). In an empty sense, all ORAL sounds are labial, in that the airflow has to pass through the lips: the important qualification in the above definition is that the lips are *actively* involved. From a position of rest, there must be a marked movement to qualify as a labial sound ('a labial'), and it is lip-rounding which is the most common and noticeable feature.

Similarly, **labialization** is a general term referring to a SECONDARY ARTICULATION involving any noticeable lip-rounding, as in the initial [k] of *coop*, or *sh-* [ʃ] of *shoe*, which are here **labialized**, because of the influence of the labialization in the following vowel [u]. Labialization is applied both to cases where the lip-rounding is an essential feature of a sound's identity, as in [u], and to cases where the lip-rounding is found only in specific contexts, as in the [k] example above – in *kill*, there is no labialization. The DIACRITIC for labialization is [ᵂ], underneath the main symbol, but a raised [ʷ] is often used. The term has developed a special status in phonological theory, especially in various NON-LINEAR models. For example, in ARTICULATOR-BASED FEATURE THEORY, it refers to a single-valued NODE involving the lips as an active articulator. In CONSTRICTION-based models, it is defined as a constriction formed by the lower lip. See also *-ISE/-IZE*.

labio-dental (*adj./n.*) A term used in the PHONETIC classification of speech sounds on the basis of their PLACE OF ARTICULATION: it refers to a sound in which one lip is actively in contact with the teeth. The usual mode of operation for a

labio-dental sound ('a labio-dental') is for the lower lip to articulate with the upper teeth, as in [f] and [v]. The opposite effect, upper lip against lower teeth, is possible in theory, but not recognized in the usual phonetic classifications. The term is also applied to articulations where the lip approaches close to the teeth, but without actual contact, as in the sound [ʋ], which is a VOWEL-like sound midway between [w] and [v]. See also DENTAL, -ISE/-IZE.

labio-velar (*adj./n.*) A term used in the PHONETIC classification of speech sounds on the basis of their PLACE OF ARTICULATION: it refers to a sound made at the velum (see VELAR) with the simultaneous accompaniment of lip-ROUNDING. A 'labio-velar SEMI-VOWEL' occurs in English as /w/, e.g. *well, wasp*; some ACCENTS preserve a VOICELESS PHONEME /ɱ/ for words written with *wh*, and thus CONTRAST such pairs as *Wales* and *whales*. See also -ISE/-IZE.

LAD see ACQUISITION

lag (*n.*) A term used in ACOUSTIC PHONETICS as part of the study of VOICE-ONSET TIME variations in INITIAL PLOSIVE CONSONANTS; **voicing lag** refers to the occurrence of voicing after the plosive release (BURST); it contrasts with 'voicing LEAD'.

la-la theory In HISTORICAL LINGUISTICS, the name of one of the speculative theories about the origins of LANGUAGE (also called the **sing-song theory**): it argues that SPEECH originated in song, play and other aspects of the romantic side of life. The INTONATION system provides some evidence, but the gap between the emotional and the rational aspects of speech expression remains to be explained.

lambda (*n.*) (λ) (1) A notion developed in mathematical logic and used as part of the conceptual apparatus underlying FORMAL SEMANTICS. The **lambda operator** is a device which constructs expressions denoting functions out of other expressions (e.g. those denoting truth values) in a process called **LAMBDA abstraction**. The process of relating equivalent lambda expressions is known as **lambda conversion**. Several kinds of **lambda calculus** have been devised as part of a general theory of functions and logic, functions here being defined as sets of unordered pairs (graphs). The approach has proved attractive to linguists because of its ability to offer a powerful system for formalizing exact meanings and semantic relationships, and lambda notions have helped to inform a number of linguistic theories, notably MONTAGUE GRAMMAR and CATEGORIAL GRAMMAR.

(2) In ACOUSTICS, the symbol for wavelength.

Lambek calculus A version of CATEGORIAL GRAMMAR developed by logician Joachim Lambek (b. 1922) as a model of natural language SYNTAX, and later adopted by linguists working in this framework. The calculus draws close parallels between syntactic PARSING and natural deduction systems in logic.

lamina (*n.*) see LAMINAL

laminal (*adj.*) A term used in PHONETIC classification, referring to a sound made with the BLADE or **lamina** of the TONGUE in contact with the upper lip,

teeth or alveolar ridge, as in ALVEOLAR (i.e. **lamino-alveolar**) or DENTAL (i.e. **lamino-dental**) sounds. A distinction needs to be made with **laminar** in acoustics, which refers to the smoothness of flow of a fluid (in this case, air) across a surface.

lamino- (*adj.*) see LAMINAL

landing site see MOVEMENT

langage /lāgaːʒ/ (*n.*) A French term introduced by Ferdinand de Saussure to refer to the human biological faculty of SPEECH. It is distinguished in his approach from **langue**, the language system of a speech community.

language (*n.*) The everyday use of this term involves several different mass-noun and count-noun senses (as ‘language in general’ *v.* ‘a language in particular’), which LINGUISTICS is careful to distinguish. At its most specific level, it may refer to the concrete act of speaking, writing or signing (see SIGN language) in a given situation – the notion of PAROLE, or PERFORMANCE. The linguistic SYSTEM underlying an individual’s use of language in a given time and place is identified by the term IDIOLECT – and this is often extended to the SYNCHRONIC analysis of the whole of a person’s language (as in ‘Shakespeare’s language’). A particular VARIETY, or LEVEL, of speech/writing may also be referred to as ‘language’ (e.g. ‘scientific language’, ‘bad language’), and this is related to the SOCIOLINGUISTIC or STYLISTIC restrictiveness involved in such terms as ‘trade language’ (see PIDGIN), the teaching of ‘languages for special purposes’ (in APPLIED LINGUISTICS), etc. In COMPUTATIONAL LINGUISTICS, a variety may be referred to as a ‘sublanguage’. In such phrases as ‘first language’, ‘the English language’, the sense is the abstract system underlying the collective totality of the speech/writing behaviour of a community (the notion of LANGUE), or the knowledge of this system by an individual (the notion of COMPETENCE). In later CHOMSKYAN linguistics, a distinction is drawn between language viewed as an element of the mind (I-LANGUAGE) and language viewed independently of the mind (E-LANGUAGE). The notion of language may be seen both in a synchronic sense (e.g. ‘the English language today’) and a DIACHRONIC sense (e.g. ‘the English language since Chaucer’). Higher-order groupings can be made, as in such notions as ‘the Romance languages’, ‘CREOLE languages’. All of these examples would fall under the heading of ‘natural languages’ – a term which contrasts with the artificially constructed systems used to expound a conceptual area (e.g. ‘formal’, ‘logical’, ‘computer’ languages) or to facilitate communication (e.g. Esperanto).

In contrast with these instances of individual languages, DIALECTS, VARIETIES, etc., there is also the abstract sense of ‘language’, referring to the biological ‘faculty’ which enables individuals to learn and use their language – implicit in the notion of ‘language ACQUISITION DEVICE’ in PSYCHOLINGUISTICS. At a comparably abstract level ‘language’ is seen as a defining feature of human behaviour – the UNIVERSAL properties of all speech/writing systems, especially as characterized in terms of ‘design features’ (e.g. PRODUCTIVITY, DUALITY, LEARNABILITY) or ‘language universals’ (FORMAL, SUBSTANTIVE, etc.). Linguistics does not, however, follow the popular application of the term to human modes of communication other than by speech and writing (cf. such phrases as ‘body language’, ‘eye

language'), on the grounds that the behaviours involved are different in kind (as the criteria of productivity and duality suggest). Nor is 'language' a term generally applied to natural animal communication (see ZOÖSEMIOTICS), except in a metaphorical way.

The term enters into several technical phrases, most of which are self-evident, e.g. 'language teaching', 'language learning', 'language change'. Some, however, require a minimum of elucidation. For example, **first language** (sc. mother-tongue) is distinguishable from **second language** (a language other than one's mother-tongue used for a special purpose, e.g. for education, government) distinguishable in turn from **foreign language** (where no such special status is implied) – though the distinction between the latter two is not universally recognized (especially not in the USA). Other terms involving 'language' are found in their alphabetical place.

language acquisition device see ACQUISITION

language areas In NEUROLINGUISTICS, the areas of the brain which seem to be most closely implicated in speaking, listening, reading, writing and signing, mainly located at or around the Sylvian and Rolandic fissures; also called the **language centres**. For example, an area in the lower back part of the frontal lobe is primarily involved in the encoding of SPEECH (Broca's area); an area in the upper back part of the temporal lobe, extending upwards into the parietal lobe, is important in the comprehension of speech (Wernicke's area). Other areas are involved in speech perception, visual perception and the motor control of speaking, writing and signing.

language attitudes A term used in SOCIOLINGUISTICS for the feelings people have about their own LANGUAGE or the language(s) of others. These may be positive or negative: someone may particularly value a foreign language (e.g. because of its literary history) or think that a language is especially difficult to learn (e.g. because the script is off-putting). Rural ACCENTS generally receive a positive evaluation, whereas urban accents do not. Knowing about attitudes is an important aspect of evaluating the likely success of a language teaching programme or a piece of LANGUAGE PLANNING.

language attrition see LANGUAGE DEATH

language awareness A term used especially in EDUCATIONAL LINGUISTICS, to refer to an informed, sensitive and critical response to the use of language by oneself and others, including the awareness of relevant terminology (**metalinguistic awareness**). A particular impetus was given to the task of promoting linguistic awareness in the early 1990s, when new perspectives on language teaching in schools came to be adopted in several countries.

language centers/centres see LANGUAGE AREAS

language change In HISTORICAL LINGUISTICS, a general term referring to change within a LANGUAGE over a period of time, seen as a universal and unstoppable process. The phenomenon was first systematically investigated by comparative

PHILOLOGISTS at the end of the eighteenth century, and in the twentieth century by historical linguists and SOCIOLINGUISTS. All aspects of language are involved, though most attention has been paid to PHONOLOGY and LEXIS, where change is most noticeable and frequent. See also CHANGE FROM ABOVE, LANGUAGE SHIFT, SOUND CHANGE.

language contact see CONTACT (1)

language death A term used in LINGUISTICS for the situation which arises when a LANGUAGE ceases to be used by a community; also called **language loss** or **obsolescence**, especially when referring to the loss of language ability in an individual. The term **language attrition** is sometimes used when the loss is gradual rather than sudden. See also ENDANGERED LANGUAGE, OBSOLESCENCE (2).

language diffusion see DIFFUSION

language engineering see LANGUAGE PLANNING

language family see FAMILY

language isolate see ISOLATE

language laboratory A term used in foreign-language learning to refer to a specially equipped classroom (a set of booths containing recording and playback facilities, capable of being monitored at a central console) which provides students with a means of listening and responding instantly, via an individual headset, to UTTERANCES made in the foreign LANGUAGE; usually abbreviated to **language lab**. Students work intensively at their own rate. The auditory medium is often supplemented by video and computer-mediated dimensions.

language learning In APPLIED LINGUISTICS and PSYCHOLINGUISTICS, the process of INTERNALIZING a language – either a mother tongue or a foreign language. The factors which affect this process (such as the individual's intelligence, memory and motivation to learn) are seen as separate from those involved in the task of language teaching.

language loss (1) A term used in LANGUAGE PATHOLOGY for the disappearance of language in an individual as a result of some trauma, such as brain damage or shock. The loss may be permanent or temporary, and varies in the severity with which it affects different aspects of language STRUCTURE.

(2) See LANGUAGE DEATH.

language loyalty A term used in SOCIOLINGUISTICS referring to a concern to preserve the use of a LANGUAGE or the traditional form of a language, when that language is perceived to be under threat. For example, many first-generation immigrants to a country are extremely **loyal** to their first language, but attitudes vary in the second generation. See also LANGUAGE ATTITUDES, LANGUAGE MAINTENANCE, LANGUAGE SHIFT.

language maintenance A term used in SOCIOLINGUISTICS, referring to the extent to which people continue to use a language once they are part of a community in which another language has a dominant position. For example, immigrant groups may **maintain** their language, out of a sense of LANGUAGE LOYALTY, despite the dominance of the language of their host country (as has often happened in the USA); or a community may continue with its language successfully despite the presence of a conquering nation (as happened with English after the Norman Conquest). See also LANGUAGE PLANNING, LANGUAGE SHIFT.

language minority see MINORITY LANGUAGE

language of thought see MENTALESE

language pathology The study of all forms of involuntary, abnormal LANGUAGE behaviour, especially when associated with medical conditions; also called **speech pathology**. The term is also used of the behaviours themselves: aphasia, for example, could be described as a type of language pathology. A practitioner of the subject is called (especially in the USA) a **speech pathologist** or (especially in the UK) a **speech and language therapist**, with **speech therapist** still commonly used in the UK, and **language pathologist** sometimes encountered elsewhere. The subject includes disorders of speaking, listening, reading and writing, and applies both to developmental abnormalities in children and to acquired abnormalities in children or adults. Any recognized area of linguistic structure and use is covered by the term, especially disorders in GRAMMAR, SEMANTICS, PHONOLOGY and PRAGMATICS. 'Language pathology' is broader in its implications than 'speech pathology', though in practice the subject-matter and professional expertise referred to by the two domains are similar. However, disorders of a primarily PHONETIC nature (such as dysarthria and dysphonia) are traditionally described as being disorders of SPEECH (in a narrow sense) as opposed to 'language', on the grounds that they lack any meaningful or symbolic function; and disorders of reading and writing are often excluded or marginalized in the study of speech pathology. The term 'pathology' is itself controversial, because of its medical connotations: therapists are often unhappy about using it to refer to disorders (such as stuttering) which lack a clear medical cause. See also CLINICAL LINGUISTICS.

language pedagogy see EDUCATIONAL LINGUISTICS

language planning A term used in SOCIOLINGUISTICS for a deliberate, systematic and theory-based attempt to solve the communication problems of a community by studying its various LANGUAGES and DIALECTS, and developing an official **language policy** concerning their selection and use; often referred to as **language engineering** and sometimes as **language treatment**. **Corpus planning** deals with the way language NORMS are chosen and codified, as when a VARIETY is selected to be a national language, a spelling system is reformed, campaigns for plain or non-sexist language are launched, and literacy programmes are introduced. It contrasts with **status planning**, which deals with the standing of one language in relation to others. Status planning is thus more concerned with the social and political implications of choosing a language, and with such matters as language attitudes, national identity, international use and minority rights. For

example, the relative standing of French and English in Canada, and such matters as the law governing their use in official documents, is a matter of status planning; the choice of which variety of French is to be taught as a standard in Canadian schools, and the provision of relevant teaching materials, is a matter of corpus planning. See also CORPUS (1).

language policy see LANGUAGE PLANNING

language revitalization program(me) A programme of support or teaching designed to improve the use of an ENDANGERED LANGUAGE or a MINORITY LANGUAGE, especially one which is close to extinction. Several such programmes are to be found around the world, as in the case of various American Indian languages, Irish Gaelic and Welsh.

language shift A term used in SOCIOLINGUISTICS to refer to the gradual or sudden move from the use of one language to another, either by an individual or by a group. It is particularly found among second- and third-generation immigrants, who often lose their attachment to their ancestral language, faced with the pressure to communicate in the language of the host country. Language shift may also be actively encouraged by the government policy of the host country. See also LANGUAGE LOYALTY, LANGUAGE PLANNING.

language socialization In child language ACQUISITION, a term describing the gradual development in children of patterns of language use which reproduce the adult system of social order. For example, adult expectations of politeness (e.g. 'Say please', 'Don't say *she*') are explicitly introduced into conversations with children from around age 3.

language spread see SPREAD (4)

language treatment see LANGUAGE PLANNING

language universals see UNIVERSAL

langue /lɑ̃/(*n.*) A French term introduced into LINGUISTICS by Ferdinand de Saussure (see SAUSSUREAN), to distinguish one of the senses of the word 'LANGUAGE' (the others being *langage* and *parole*). It refers to the language SYSTEM shared by a community of speakers, and is usually contrasted with 'parole', which is the concrete act of speaking in actual SITUATIONS by an individual (compare COMPETENCE and PERFORMANCE).

laryngealized (*adj.*), **laryngealization** (*n.*) see CREAKY, LARYNX

laryngogram, **laryngograph(y)** (*n.*) see ELECTROGLOTTOGRAPH

larynx (*n.*) The part of the windpipe, or trachea, containing the VOCAL CORDS. The larynx, or 'voice box', is a casing of muscle and cartilage, which at the front is most noticeable in the protruberance in the adult male neck known as the 'Adam's apple'. Its functions are both biological and LINGUISTIC. Under the former

heading, the larynx acts as a valve to shut off the lungs, e.g. to aid the process of exertion. Under the latter heading, the larynx is involved in the production of several types of sound effect (e.g. VOICING, PITCH, whisper, GLOTTAL stop, glottalic sounds): these functions are described more fully under VOCAL CORDS. Speech sounds made in the larynx are sometimes referred to as **laryngeals**, and this term has come to be used in some models of NON-LINEAR PHONOLOGY, where a **laryngeal node** may be represented within the FEATURE HIERARCHY, within which is grouped a series of **laryngeal features** representing various states of the vocal cords (e.g. spread *v.* constricted, voiced *v.* unvoiced, stiff *v.* slack). **Laryngealization** refers to variation in the mode of vibration of the vocal cords, over and above their normal vibratory mode in the production of voice, as in CREAKY voice. **Laryngealized** sounds are sometimes used CONTRASTIVELY with non-laryngealized sounds in LANGUAGE, e.g. in Hausa. See -ISE/-IZE.

The traditional method of examining the inside of the larynx is by using the **laryngoscope**, a mirror placed at an angle inside the mouth: several high-speed films of vocal-cord activity have been made using this technique. The fibre-optic laryngoscope allows a more direct and flexible inspection to be made: the fibres are inserted through the nose, and thus interfere less with normal speech. The (electro)**laryngograph** is a device for recording vocal-cord vibrations visually, using electrodes placed against the appropriate part of the neck.

last-cyclic rules see CYCLE (1)

last resort A term used in the MINIMALIST PROGRAMME to refer to a SYNTACTIC operation which is applicable only when other options are prohibited. It is one of various specific ECONOMY principles (another is LEAST EFFORT) which have been made to maintain a minimalist perspective in the evaluation of DERIVATIONS. An example is the use of DUMMY *do* in English, which takes place only when other options for realizing TENSE and AGREEMENT are blocked.

latent consonant In PHONOLOGY, a term used to describe a CONSONANT pronounced only under certain circumstances; opposed to **fixed** consonants, which are always pronounced. The notion has been used especially in French phonology, in relation to such phenomena as LIAISON.

lateral (*adj./n.*) A term used in the PHONETIC classification of CONSONANT sounds on the basis of their MANNER OF ARTICULATION: it refers to any sound where the air escapes around one or both sides of a CLOSURE made in the mouth, as in the various types of *l* sound. Air released around only one side of the TONGUE produces **unilateral** sounds; around both sides **bilateral** sounds. Lateral sounds may be VOICED, as in *lady*, *pool*, or VOICELESS, as in *play*, where the [l] has been devoiced due to the influence of the preceding voiceless consonant: [l̥]. An independent voiceless *l* sound occurs with Welsh *ll*, as in *Llandudno*, but here there is much accompanying friction, and the sound is best described as a 'lateral FRICATIVE' [ɬ]. /t/ and /d/ followed by /l/ in English are often released laterally, the phenomenon of 'lateral PLOSION': the air escapes round the sides of the tongue, the closure between tongue and ALVEOLAR ridge remaining, as in *bottle*, *cuddle*. It is possible to say the final SYLLABLE of such words without moving the front of the tongue from its contact at all.

In some DISTINCTIVE FEATURE approaches to PHONOLOGY, the term 'lateral' is specifically opposed to **non-lateral** (i.e. sounds which do not have a lateral release, as described above), these being postulated as two of the contrasts needed in order to specify fully the sound system of a language. In Chomsky and Halle's theory (see CHOMSKYAN), for example, 'lateral' is classified as a CAVITY feature, along with NASAL, under the specific heading of SECONDARY APERTURES.

lattice (*n.*) A concept from abstract algebra, sometimes applied in SEMANTIC theory to model MEREOLGY (part/whole relations). A lattice is a structured set in which every pair of elements has a 'join' (SUM) as well as a 'meet' (or 'product'), conforming to certain conditions. Sometimes the weaker notion of a **semi-lattice** is used instead, requiring every pair of elements to have a sum but not necessarily a product.

law (*n.*) see SOUND CHANGE

lax (*adj.*) One of the features of sound set up by Jakobson and Halle (see JAKOBSONIAN) in their DISTINCTIVE FEATURE theory of PHONOLOGY, to handle variations in MANNER OF ARTICULATION. Lax sounds are those produced with less muscular effort and movement, and which are relatively short and indistinct, compared to tense sounds (see TENSION). Examples are VOWELS articulated nearer the CENTRE of the vowel area (as in *bit*, *put*).

layer (*n.*) see METRICAL GRID

layering (*n.*) A term used by some LINGUISTS to refer to the successive HIERARCHICAL LEVELS in an IMMEDIATE-CONSTITUENT analysis. In TAGMEMIC GRAMMAR, it refers to the inclusion of a tagmemic CONSTRUCTION within another construction at the same level, as in *the car in the road*, where the PHRASE is within a phrase. Here it contrasts with LOOPBACK and LEVEL SKIPPING.

lazy pronoun In GRAMMAR and SEMANTICS, a term sometimes used for a usage (quite common in informal speech) where there is an imprecise match between a PRONOUN and its ANTECEDENT; also called **pronoun of laziness**. For example, in *X wears her hat every day of the week. Y wears it only on Sundays*, the *it* in the second sentence should more precisely be *hers*. In such cases, the pronoun is being interpreted as equivalent to a repetition of the antecedent, even though it is not CO-REFERENTIAL with it. See also PAYCHECK SENTENCE.

lead (*n.*) A term used in ACOUSTIC PHONETICS as part of the study of VOICE-onset time variations in INITIAL PLOSIVE CONSONANTS: **voicing lead** refers to the occurrence of voicing before the plosive release (BURST); it contrasts with 'voicing LAG'.

leaf node see NODE

learnability (*n.*) A suggested defining property of human LANGUAGE (contrasting with the properties of other SEMIOTIC SYSTEMS), referring to the way any language can in principle be acquired by any normal child given the opportunity

to do so. More specifically, the term is used in linguistics with reference to the mathematical investigation of the IDEALIZED learning procedures needed for the ACQUISITION of GRAMMARS (**learnability theory** or 'learning theory'). Because the emphasis is on the way in which grammars can be induced from linguistic input, the approach is also characterized as 'grammar induction' or 'grammatical inference'.

learning (*n.*) see ACQUISITION

learning theory see LEARNABILITY

least effort A principle in the MINIMALIST PROGRAMME involving the comparison of alternative SYNTACTIC DERIVATIONS: that derivation is preferred which involves the smallest amount of MOVEMENT of a CONSTITUENT within a particular CONFIGURATION. It is one of various specific ECONOMY principles (another is LAST RESORT) which have been made to maintain a minimalist perspective in the evaluation of derivations. Examples of such principles are SHORTEST MOVE, GREED and PROCRASTINATE.

lect (*n.*) A term used by some SOCIOLINGUISTS to refer to a collection of LINGUISTIC phenomena which has a functional identity within a SPEECH COMMUNITY, but without specifying the basis on which the collection was made (e.g. whether the lect was regional (see DIALECT), social (see SOCIOLECT), etc.). Different levels of identity are recognized within the variety continuum – in particular, BASILECT, MESOLECT and ACROLECT. GRAMMARS which take **lectal** variation into account are referred to as PANLECTAL or POLYLECTAL.

left-associative grammar A term used in COMPUTATIONAL LINGUISTICS for a type of GRAMMAR which operates with a regular order of LINEAR compositions. This approach, based on the building up and cancelling of VALENCIES, aims to avoid the irregular ordering introduced by CONSTITUENT STRUCTURE analysis which, it claims, results in computational inefficiency. Left-associative PARSERS are distinctive in that the history of the parse doubles as the linguistic analysis.

left-branching (*adj.*) A term used in GENERATIVE GRAMMAR to refer to a CONSTRUCTION whose complexity is represented on the left-hand side of a TREE diagram. The type of RULE involved can be represented by $X \rightarrow (X) + Y$. For example, the phrase *my friend's aunt's pen* is a 'left-branching' or 'left RECURSIVE' structure; it contrasts with the RIGHT-BRANCHING character of *the pen of the friend of my aunt*. Within classical TRANSFORMATIONAL grammar, the **left branch constraint/condition** asserts that no element on the left branch of another noun phrase may be extracted from that noun phrase. The condition accounts for the unacceptability of English sentences such as **How many did you read – books?*, in which an adjective phrase has been extracted out of the noun phrase headed by *books*.

left dislocation In GRAMMATICAL description, a type of SENTENCE in which one of the CONSTITUENTS appears in INITIAL position and its CANONICAL position is filled by a PRONOUN or a full LEXICAL NOUN PHRASE with the same REFERENCE,

e.g. *John, I like him/the old chap*. In TRANSFORMATIONAL grammar, left dislocation sentences have been contrasted with TOPICALIZATION sentences. The former are analysed as BASE-generated and the latter as involving MOVEMENT.

left-headed foot see HEAD (1)

left-linear grammar see LINEAR GRAMMAR

leftness principle A principle introduced into GOVERNMENT-BINDING THEORY to avoid all cases of weak CROSSOVER at the level of LOGICAL FORM: a VARIABLE cannot be the ANTECEDENT of a PRONOUN to its left.

left-recursive (*adj.*) see LEFT-BRANCHING

lemma (*n.*) (1) In LEXICOLOGY, the item which occurs at the beginning of a dictionary entry; more generally referred to as a **headword**. It is essentially an abstract representation, subsuming all the formal LEXICAL variations which may apply: the verb *walk*, for example, subsumes *walking*, *walks* and *walked*.

(2) A term used in PSYCHOLINGUISTICS referring to the SYNTACTIC and SEMANTIC properties of a word represented in the mental LEXICON. The PHONETIC shape of the word is thought to be represented separately. The distinction can be seen in various kinds of speech production ERROR; for example, malapropisms (e.g. saying *illiterate* but meaning *obliterate*) illustrate the possibility that the correct lemma can be activated but with an incorrect phonetic shape.

length (*n.*) (1) A term used in PHONETICS to refer to the physical duration of a sound or UTTERANCE, and in PHONOLOGY to refer to the relative DURATIONS of sounds and SYLLABLES when these are linguistically contrastive; also referred to as QUANTITY. Sometimes the term is restricted to phonological contexts, the phonetic dimension being referred to as 'duration'. Phonologically **long** and **short** values are conventionally recognized, for both VOWELS and CONSONANTS. LANGUAGES often have one degree of phonological length, and may have more than one. **Long vowels** (transcribed with the DIACRITIC [:]) occur in Arabic and Finnish; **long consonants** (or **double consonants**) in Lithuanian and Luganda. A further contrast of length (**over-long** or **extra-long**) is also sometimes encountered with vowels. In English, the so-called distinction between long and short vowels (as in *beat/bit*) is not strictly a contrast in length, as QUALITY variations are always involved. See also COMPENSATORY LENGTHENING, MORA, WEIGHT.

(2) The notion of physical length has also been used in PSYCHOLINGUISTIC, SOCIOLINGUISTIC and STYLISTIC studies of GRAMMAR and VOCABULARY, in an attempt to quantify variations in the apparent COMPLEXITY of SENTENCES, WORDS, etc. Notions such as **sentence length** and **mean length of utterance** have been studied in terms of the number of CONSTITUENT words, MORPHEMES, SYLLABLES, etc., which they contain. These quantifications have been criticized by many LINGUISTS, on the grounds that there is no necessary correlation between the length of a linguistic UNIT and its STRUCTURAL or FUNCTIONAL COMPLEXITY.

lenis (*adj.*) A general term used in the PHONETIC classification of CONSONANT sounds on the basis of their MANNER OF ARTICULATION: it refers to a sound made

with a relatively weak degree of muscular effort and breath force, compared with some other sound (known as FORTIS). The distinction between LAX and TENSE is used similarly. The labels 'weak' and 'strong' are sometimes used for the contrast involved, but these are more prone to ambiguity. In English, it is the VOICED CONSONANTS ([b], [d], [v], [z], etc.) which tend to be produced with lenis articulation (their voiceless counterparts being relatively strong), and often, when the voicing distinction is reduced, it is only the degree of articulatory strength which maintains a contrast between sounds. The term 'lenis' is sometimes used loosely to refer to weak vowel articulation also, but this is not a standard practice.

lenite (*v.*) see lenition

lenition (*n.*) A term used in PHONOLOGY to refer to a weakening in the overall strength of a sound, whether DIACHRONICALLY or SYNCHRONICALLY; opposed to **fortition**. Typically, lenition involves the change from a STOP to a FRICATIVE, a fricative to an APPROXIMANT, a voiceless sound to a VOICED sound, or a sound being reduced (**lenite**) to zero. For example, the initial MUTATION in Celtic languages shows lenition in such cases as Welsh *pen* 'head' becoming *ben* '(his) head'.

lento (*adj.*) A term derived from music and sometimes used in PHONETICS and PHONOLOGY to describe speech produced slowly or with careful articulation; it contrasts with **allegro**, where the speech is faster than usual. Several other music-derived terms have been appropriated for the study of speech PROSODY, such as *crescendo*, *diminuendo*, *rallentando* and *glissando*, though none has achieved widespread currency.

level (*n.*) (1) A general term in LINGUISTICS to refer to a major dimension of STRUCTURAL organization held to be susceptible of independent study. The most widely recognized **levels of analysis** are PHONOLOGY, GRAMMAR and SEMANTICS, but often PHONETICS is distinguished from phonology, LEXIS from semantics, and MORPHOLOGY and SYNTAX are seen as separate levels within grammar. PRAGMATICS is also sometimes described as a level. Some linguistic MODELS make even more specific divisions, identifying MORPHOPHONOLOGY, for example, as a separate level. An analogous notion is found in all theories, e.g. the COMPONENTS of a GENERATIVE grammar, or the STRATA of STRATIFICATIONAL grammar. There is considerable difference of opinion concerning not only the number but also the way these levels should be interrelated in a linguistic theory. BLOOMFIELDIAN linguistics, for example, saw analysis as a matter proceeding unidirectionally from the 'lower' levels of phonetics through the progressively 'higher' levels of phonology, morphology and syntax towards semantics. In this approach, the 'mixing of levels' was disallowed: phonology, for example, was to be analysed without reference to higher levels of description. In HALLIDAYAN linguistics, phonology is seen as an **inter-level**, linking the level of phonic/graphic SUBSTANCE with that of grammatical/lexical FORMS. 'Double ARTICULATION' theories recognize the main levels only. When criteria of analysis from different levels coincide in establishing a linguistic UNIT (as when phonological and grammatical criteria are found to agree in identifying the WORDS in a language), the term 'CONGRUENCE of levels' is sometimes used.

(2) In GENERATIVE linguistics, **level** is used to refer to the different types of REPRESENTATION encountered within the DERIVATION of a SENTENCE. For example, DEEP- and SURFACE-STRUCTURE **levels of representation** are commonly recognized, as are SYSTEMATIC PHONEMIC and PHONETIC levels. Linguistic operations, such as TRANSFORMATIONS, can be described as taking place at certain **levels of depth**. In X-BAR theory, categories are analysed at ZERO- or word level and at PHRASE level. See also LEXICAL PHONOLOGY.

(3) The different STRUCTURAL layers within a linguistic HIERARCHY are often referred to as **levels**; e.g. within grammar one might talk of the levels (or RANKS) of SENTENCE, CLAUSE, phrase, WORD and MORPHEME. This view is a central feature of TAGMEMIC analysis. In METRICAL PHONOLOGY, metrical trees display different levels of structure (**prosodic levels**).

(4) The various degrees of progress which it is anticipated linguistics can achieve are referred to as **levels** (or 'criteria') of ADEQUACY.

(5) Within PHONETICS and PHONOLOGY, 'level' may be used to characterize (a) the degree of PITCH height of an UTTERANCE, or SYLLABLE, e.g. 'average pitch level', 'four pitch levels', or (b) the degree of loudness of a sound, e.g. 'three levels of STRESS'. **Level tone** is used by some INTONATION analysts to refer to a NUCLEAR tone which has neither a FALLING nor a RISING component (as in the tone of boredom or sarcasm in English, e.g. *reāally*). **Level stress** is sometimes used to refer to COMPOUNDS where the two items have a major stress feature, e.g. *washing machine*.

(6) In STYLISTICS and SOCIOLINGUISTICS, **level** is often used to refer to a mode of expression felt to be appropriate to a type of social SITUATION, e.g. 'FORMAL level', 'intimate level'. Sometimes, several such stylistic levels are distinguished within the range of formality (e.g. 'frozen', 'casual', 'deliberative').

levelling (*n.*) In HISTORICAL LINGUISTICS, the gradual loss of a linguistic distinction, so that forms which were originally CONTRASTIVE become identical. For example, Old English NOUNS generally distinguished NOMINATIVE and ACCUSATIVE cases, but in Modern English these have been **levelled** to a single form. The term is also used in DIALECTOLOGY, where it refers to the lessening of differences between regional dialects as a result of social forces (such as the influence of the media) which are influencing people to speak in a similar way. The spread of the phenomenon of (certain features of) ESTUARY ENGLISH throughout England in the later decades of the twentieth century is an illustration.

level-skipping (*n.*) A term used in TAGMEMIC GRAMMAR to refer to a process of SYNTACTIC CONSTRUCTION where a LEVEL has been omitted. In such cases, a FILLER from a lower-level construction is used in a higher-level one, as when a GENITIVE ending (from the MORPHEME level) is attached to a PHRASE, rather than a WORD (e.g. *the King of Spain's daughter*). It is contrasted with LOOPBACK and LAYERING.

level stress/tone see LEVEL (5)

lexeme (*n.*) A term used by some LINGUISTS to refer to the minimal DISTINCTIVE UNIT in the SEMANTIC SYSTEM of a LANGUAGE. Its original motivation was to reduce the AMBIGUITY of the term WORD, which applied to orthographic/

PHONOLOGICAL, GRAMMATICAL and LEXICAL LEVELS, and to devise a more appropriate term for use in the context of discussing a language's vocabulary. The lexeme is thus postulated as the abstract unit underlying such sets of grammatical VARIANTS as *walk*, *walks*, *walking*, *walked*, or *big*, *bigger*, *biggest*. IDIOMATIC phrases, by this definition, are also considered **lexemic** (e.g. *kick the bucket* (= 'die')). Lexemes are the units which are conventionally listed in dictionaries as separate entries.

lexical (*adj.*) see LEXIS

lexical ambiguity see AMBIGUITY

lexical cycle see CYCLE (2)

lexical density In STATISTICAL LINGUISTICS and LEXICAL studies, a measure of the difficulty of a TEXT, using the ratio of the number of different WORDS in a text (the 'word types') to the total number of words in the text (the 'word tokens'); also called the **type/token ratio** (TTR). It is calculated by dividing the number of different words by the total number of words and multiplying by 100. The result is given as a percentage. The assumption is that increasing the number of different words (i.e. a higher TTR) increases textual difficulty.

lexical diffusion see DIFFUSION

lexical entry see ENTRY (1)

lexical-functional grammar (LFG) A LINGUISTIC theory in which the role of the LEXICON is central, and grammatical FUNCTIONS are taken as PRIMITIVE. The SYNTACTIC STRUCTURE of a SENTENCE consists of a CONSTITUENT structure (**c-structure**) and a FUNCTIONAL structure (**f-structure**), which represent superficial GRAMMATICAL RELATIONS. In this approach, the LEXICAL COMPONENT is assigned much of the role formerly associated with the syntactic component of a TRANSFORMATIONAL grammar.

lexicalist (*adj./n.*) see LEXIS

lexical item see LEXIS

lexicalize (*v.*) see LEXIS

lexical minimality see MINIMALITY

lexical morpheme see MORPHEME

lexical noun phrase A term used in later GENERATIVE GRAMMAR to refer to a type of NOUN PHRASE with PHONOLOGICAL content which is of particular importance for the theory of BINDING. Unlike anaphors and pronominals, lexical NPs are FREE in all POSITIONS in the SENTENCE; their REFERENCE is typically independent of other NPs. A contrast can be drawn with non-lexical noun phrases (PRO, *pro*, *t*). See EMPTY (1).

lexical phonology (LP) A theory of PHONOLOGY in which MORPHOLOGICAL and PHONOLOGICAL RULES are brought together within a single framework. The approach is based on the insight that much of the phonology operates together with the WORD-FORMATION rules in a CYCLIC fashion to define the class of LEXICAL items in a language. The morphological sub-theory is 'level-ordered': AFFIXES are differentiated, not by the use of BOUNDARY-MARKERS (as in earlier phonological theory), but by being divided into distinct subsets (numbered 'levels' or 'strata') within the LEXICON, where the division of the word-formation rules corresponds to a division among the phonological rules. The phonological sub-theory is divided into a **lexical** (sometimes called a **cyclic**) COMPONENT and a **post-lexical** (sometimes called a **post-cyclic**) component, the latter also being referred to as the 'PHRASAL phonology', as its rules operate across word boundaries, making use of SYNTACTIC structure.

lexical phrase A type of PHRASE recognized in GOVERNMENT-BINDING THEORY for a structural configuration built around a LEXICAL head, as in the case of NP and VP. It contrasts with FUNCTIONAL PHRASE.

lexical representation language A model used in SEMANTICS TO REPRESENT basic LEXICAL entries and characterize systematic lexical processes. A notion of 'types' is used to structure lexical entries, which are represented as FEATURE structures (a 'typed feature structure language'), and specify how they combine by means of GRAMMAR rules, or CONSTRAINTS on PHRASAL types. The types are organized in a conceptual HIERARCHY as a LATTICE framework, with the top being the most general type and the bottom indicating inconsistency. The model is not restricted to lexical representation (despite its name), being also used for SYNTAGMATIC description.

lexical stress see STRESS

lexical tone see TONE (1)

lexical verb A term used in GRAMMAR for a VERB which expresses an action, event or state; also called a **full verb**. The contrast is with the AUXILIARY verb system, which expresses attitudinal and grammatical meanings. The 'main verb' of a verb phrase is always a lexical verb.

lexicography (*n.*) see LEXICOLOGY

lexicology (*n.*) A term used in SEMANTICS for the overall study of a language's vocabulary (including its history). It is distinguished from **lexicography**, which is the art and science of dictionary-making, carried out by **lexicographers**. Lexicography could accordingly be seen as a branch of 'applied lexicology'. The term **lexicologist** is less widely used: someone interested in vocabulary would normally be considered a species of semanticist. The psychological study of word meaning (e.g. the linguistic expression of spatial relations) is sometimes known as **psycholexicology**.

lexicon (*n.*) In its most general sense, the term is synonymous with VOCABULARY. A dictionary can be seen as a set of lexical ENTRIES. The lexicon has a special

status in GENERATIVE GRAMMAR, where it refers to the COMPONENT containing all the information about the STRUCTURAL properties of the LEXICAL ITEMS in a LANGUAGE, i.e. their specification SEMANTICALLY, SYNTACTICALLY and PHONOLOGICALLY. In later MODELS (see ASPECTS MODEL), these properties are formalized as FEATURES, and put in square brackets, e.g. WORD-CLASS assignments include NOUN [+N], etc. Given this component, the TERMINAL symbols in PHRASE-MARKERS can then be related directly to the lexicon through the use of lexical TRANSFORMATIONS; e.g. any item in the lexicon specified by [+D] can be attached to the NODE D, and so on. The **mental lexicon** is the stored mental representation of what we know about the lexical items in our language.

lexicon optimization An ALGORITHM in OPTIMALITY THEORY which evaluates CANDIDATE INPUT forms with respect to the actual OUTPUT. A series of TABLEAUX is examined, and the input–output pair receiving the fewest CONSTRAINT VIOLATIONS is chosen as the optimal outcome.

lexicostatistics (*n.*) A technique used in GLOTTOCHRONOLOGY with which one attempts to make quantitative comparisons between the rates of change within sets of LEXICAL ITEMS in hypothetically related LANGUAGES, and thus to deduce the distance in time since the languages separated. Other types of lexical comparison (e.g. to determine the mutual intelligibility of languages) may also be referred to by this label.

lexis (*n.*) A term used in LINGUISTICS to refer to the vocabulary of a LANGUAGE, and used adjectivally in a variety of technical phrases. A UNIT of vocabulary is generally referred to as a **lexical item**, or LEXEME. A complete inventory of the lexical items of a language constitutes that language's dictionary, or LEXICON – a term particularly used in GENERATIVE GRAMMAR: items are listed 'in the lexicon' as a set of **lexical entries**. The way lexical items are organized in a language is the **lexical structure** or **lexical system**. A group of items used to identify the network of contrasts in a specific semantic or **lexical field** (e.g. cooking, colour) may also be called a 'lexical SYSTEM'. Specific groups of items, sharing certain FORMAL or semantic features, are known as **lexical sets**. The absence of a lexeme at a specific STRUCTURAL place in a language's lexical field is called a **lexical gap** (e.g. *brother v. sister, son v. daughter*, etc., but no separate lexemes for 'male' *v.* 'female' *cousin*). In comparing languages, it may be said that one language may **lexicalize** a contrast, whereas another may not – that is, the contrast is identified using lexemes, as in the many terms for the English lexeme 'hole' available in some Australian Aboriginal languages. Lexis may be seen in contrast with GRAMMAR, as in the distinction between 'grammatical WORDS' and **lexical words**: the former refers to words whose sole function is to signal grammatical relationships (a role which is claimed for such words as *of, to* and *the* in English); the latter refers to words which have **lexical meaning**, i.e. they have semantic CONTENT. Examples include **lexical verbs** (*v.* auxiliary verbs) and **lexical noun phrases** (*v.* non-lexical NPs, such as PRO). A similar contrast distinguishes **lexical morphology** from derivational MORPHOLOGY. HALLIDAYAN linguistics makes a theoretical distinction between grammar and lexis, seen as two subdivisions within linguistic FORM: lexis here is studied with reference to such formal concepts as COLLOCATION, and not in semantic terms. The mutual restriction governing the CO-OCCURRENCE of

sets of lexical items is known as **lexical selection** (e.g. ANIMATE NOUNS being compatible with animate VERBS). **Lexical density** is a measure of the difficulty of a text, using the ratio of the number of different words (the 'word types') to the total number of words (the 'word tokens'); the 'type-token ratio'.

In GENERATIVE GRAMMAR, the insertion of particular lexemes at particular places in grammatical structures is carried out by a process of **lexical substitution** or **lexical transformation**, using **lexical insertion rules**. **Lexical redundancy rules** are used to simplify the specification of lexical entries, e.g. by omitting to specify SUB-CATEGORIZATION FEATURES which may be predicted on the basis of other features. Some generative models also recognize the so-called '**lexicalist**' **hypothesis**, in which a class of lexical rules governing word-formation is distinguished from the set of syntactic transformations. Essentially, the hypothesis bans category-changing rules from the grammar – disallowing a verb or adjective from being transformed into a noun, etc. The terms **lexical syntax** and **lexical phonology** are also encountered in the generative literature: the former refers to an approach which incorporates syntactic rules within the lexicon; the latter is an approach where some of the PHONOLOGICAL rules are transferred to the lexicon, and integrated with the MORPHOLOGICAL component. In earlier GOVERNMENT-BINDING THEORY, N, V and A (but not P) were lexical categories, as their members were proper governors. In later work, the lexical categories are N, V, A and P, and C and I are non-lexical. See also AMBIGUITY, CYCLE (2), STRESS.

lexotactics (*n.*) see TAXIS

liaison (*n.*) A term used in PHONOLOGY to refer to one type of TRANSITION between sounds, where a sound is introduced at the end of a WORD if the following SYLLABLE has no ONSET. It is a notable feature of French, e.g. the final *t* of *c'est* is pronounced when followed by a VOWEL. It may be heard in English where a 'LINKING /r/' is often found in words ending with an *r* in the spelling, when they occur before words beginning with a vowel, e.g. *bear* /hɪə/ usually becomes /hɪər/ in such phrases as *here are*.

licensed extrasyllabicity see EXTRASYLLABIC

licensing (*n.*) In GOVERNMENT-BINDING THEORY, a notion introduced in formulating conditions on REPRESENTATION: every element in a WELL FORMED structure must be **licensed** in one of a small number of ways. For example, an element that assigns SEMANTIC ROLES is licensed if it has recipients in appropriate SYNTACTIC positions; a syntactically defined PREDICATE is licensed if it has a SUBJECT.

The term as used in AUTOSEGMENTAL PHONOLOGY applies to the analysis of SYLLABLE structure. **Prosodic licensing** is a condition that all SEGMENTS must be part of a higher-level unit (the syllable), or else they are contingently EXTRASYLLABIC. **Autosegmental licensing** presents the view that certain PROSODIC units are **licensors**, which license a set of phonological features (AUTOSEGMENTS). The syllable NODE is a **primary licenser**; the CODA node and certain word-FINAL MORPHEMES are **secondary licensers**. A given licenser can license only one occurrence of the autosegment in question. All autosegmental material must be licensed at the WORD level; elements not licensed at this level will be DELETED. The notion

of licensing has also been put to use in some other NON-LINEAR models of phonology and also in OPTIMALITY THEORY.

light syllable see WEIGHT

light verb In GRAMMAR, a term describing a VERB whose meaning is so inspecific that it needs a COMPLEMENT in order to function effectively as a PREDICATE. Examples in English include *make*, *have* and *give*, as used in such phrases as *she made a sign*, *we had a look* and *they gave an answer*. In many cases an alternative LEXICAL verb with a more specific meaning is available, as in *she signed*, *we looked* and *they answered*. The term is also used for such verbs as *suru* in Japanese – a thematically incomplete verb which adds CASE-marking to its complement but requires another verb in order to THETA-mark it.

line (*n.*) see ASSOCIATION LINE

linear grammar A term used in COMPUTATIONAL LINGUISTICS for a type of GRAMMAR which describes only LINEAR or non-HIERARCHICAL aspects of STRINGS; also known as **regular grammar**. If the NON-TERMINAL symbol is the leftmost symbol on the right-hand side of a RULE, the grammar is a **left-linear grammar**; if it is the rightmost, it is a **right-linear grammar**. For example, a right-linear grammar has rules of the form $A \rightarrow aB$, $B \rightarrow b$. See also FINITE-STATE GRAMMAR.

linearity (*n.*) (1) A term used in LINGUISTICS to describe the characteristic REPRESENTATION of LANGUAGE as a unidimensional SEQUENCE of ELEMENTS or RULES. The assumption is made that it is possible to order rules in a sequence, and to adhere strictly to this ordering in constructing DERIVATIONS without any loss of GENERALITY (compared to an unordered set of rules or a set ordered on a different principle, e.g. one of simultaneous application). It is also claimed that **linear** ordering makes it possible to formulate grammatical processes that would otherwise not be expressible with complete generality.

(2) In PHONOLOGY, **linearity** is an organizational principle, whereby each occurrence of a PHONEME is associated with a specific sequence of PHONES (minimally, one phone) which realize that phoneme. If phoneme A precedes phoneme B, then phone(s) A' will precede phone(s) B'. Linearity is thus one of the preconditions of BIUNIQUENESS. The principle is criticized by GENERATIVE phonologists, as part of a general attack on TAXONOMIC phonemics.

(3) A family of FAITHFULNESS CONSTRAINTS in OPTIMALITY THEORY which evaluates, along with CONTIGUITY, the preservation of ADJACENCY ordering of SEGMENTS between two forms. It requires that corresponding segments should be in the same order in both REPRESENTATIONS. METATHESIS is an example of a phenomenon which violates linearity.

linear phonology see NON-LINEAR PHONOLOGY

linear precedence rule (LP rule) A type of RULE in GENERALIZED PHRASE-STRUCTURE GRAMMAR of the form $X < Y$, specifying that X must precede Y. Together with IMMEDIATE DOMINANCE rules and various general PRINCIPLES, LP rules generate PHRASE-MARKERS.

linear prediction A technique used in SPEECH SYNTHESIS and SPEECH RECOGNITION to represent ACOUSTIC PHONETIC knowledge in a way which is capable of computational processing. In **linear prediction coefficient (LPC)** synthesis, a speech signal is defined by a set of coefficients (predictors), which try to predict the signal from its past time domain values. These coefficients are then used to produce a REPRESENTATION of the SPECTRUM of the signal. The approach is based on the analysis of RESONANCES in the VOCAL TRACT, and is thus especially useful in its ability to identify FORMANT locations (though sounds involving NOISE features are less accurately modelled), producing syntheses of high quality. The technique is increasingly common in spectral analysis within PHONETICS.

lingua franca A term used in SOCIOLINGUISTICS, and often in everyday speech, to refer to an auxiliary LANGUAGE used to enable routine communication to take place between groups of people who speak different native languages; also sometimes called an **interlingua**. English is the world's most common lingua franca, followed by French; but other languages are also widely used. In East Africa, for example, Swahili is the lingua franca; in many parts of West Africa, Hausa is used.

lingual (*adj.*) A general term sometimes used in the PHONETIC classification of speech sounds, referring to a sound made with the TONGUE. A 'lingual roll/trill', for example, is the trilled [r] made with the TIP of the tongue against the ALVEOLAR ridge. The term **linguo-** is occasionally used as a PREFIX in the definition of PLACE OF ARTICULATION (e.g. 'linguolabial', where the tongue would be in contact with the lips, as in 'blowing raspberries'), but usually more specific prefixes are used (e.g. APICO-, LAMINO-).

linguist (*n.*) The normal term for a student or practitioner of the subject of LINGUISTICS. **Linguistician** is often cited for this purpose, but it is never used by professional linguists about themselves. Ironically, confusion sometimes arises from the earlier, and still current, sense of someone proficient in several languages.

linguistic (*adj.*) A term which has to be used with care because of its ambiguity: it can be (1) the adjective from LANGUAGE, as in such phrases as 'linguistic philosophy', 'linguistic skill' and 'linguistic minority', or (2) the adjective from LINGUISTICS, where it refers to an approach characterized by the scientific attributes of that subject, as in 'linguistic analysis'. In such phrases as 'linguistic intuition', however, either sense could apply: (a) intuitions about language, or (b) 'intuitions about how to analyse language linguistically'. Similarly, a 'linguistic atlas' may or may not be based on the techniques, findings, etc., of linguistics.

linguistically significant generalization A term used especially in GENERATIVE GRAMMAR to refer to the kind of analytic statement which it is hoped the grammatical analysis will provide. The aim of the grammar is not just to generate all and only the grammatical SENTENCES of a language, but to do this in such a way that those relationships felt to be significant by NATIVE-SPEAKERS are expressed in an economical and GENERAL way. For example, a grammar which generated ACTIVE sentences separately from PASSIVE ONES, or QUESTIONS from STATEMENTS, and which failed to show these are interrelated, would be missing linguistically

significant generalizations. This was one of the reasons for the introduction of TRANSFORMATIONS into linguistic analysis. The extent to which a grammar expresses the linguistically significant generalizations about a language would be one measure of the grammar's ADEQUACY.

linguistic anthropology see ANTHROPOLOGICAL LINGUISTICS

linguistic area see AREA

linguistic atlas see DIALECT

linguistic determinism see RELATIVITY

linguistic environment see ENVIRONMENT (2)

linguistic form see FORM (1)

linguistic geography see DIALECT, GEOLINGUISTICS

linguistic historiography The study of the history of ideas in LINGUISTICS and LANGUAGE study. The subject traces the origins of thinking about language from Classical times, using Greek, Roman, Indian, Arabic and other sources, continuing with the various schools of thought in the Middle Ages and the emergence of 'traditional' accounts of pronunciation, spelling, GRAMMAR, LEXICOGRAPHY and USAGE, down to the antecedents of present-day scientific and popular views of language and languages. All languages are in principle included, though most work has been carried out on European languages, where historical records are most in evidence. The subject also includes debate on the methodological and philosophical foundations of historiography, including its relationship to the history and philosophy of science.

linguistician (*n.*) see LINGUIST

linguistic minority see MINORITY LANGUAGE

linguistic philosophy see PHILOSOPHICAL LINGUISTICS

linguistic relativity see RELATIVITY

linguistics (*n.*) The scientific study of LANGUAGE; also called **linguistic science**. As an academic discipline, the development of this subject has been relatively recent and rapid, having become particularly widely known and taught in the 1960s. This reflects partly an increased popular and specialist interest in the study of language and communication in relation to human beliefs and behaviour (e.g. in theology, philosophy, information theory, literary criticism), and the realization of the need for a separate discipline to deal adequately with the range and complexity of linguistic phenomena; partly the impact of the subject's own internal development at this time, arising largely out of the work of the American linguist Noam Chomsky and his associates (see CHOMSKYAN), whose more

sophisticated analytic techniques and more powerful theoretical claims gave linguistics an unprecedented scope and applicability.

Different branches may be distinguished according to the linguist's focus and range of interest (and each is dealt with in separate entries in this book). A major distinction, introduced by Ferdinand de Saussure (see SAUSSUREAN), is between **diachronic** and **synchronic linguistics**, the former referring to the study of language change (also called **historical linguistics**), the latter to the study of the state of language at any given point in time. In so far as the subject attempts to establish general principles for the study of all languages, and to determine the characteristics of human language as a phenomenon, it may be called **general linguistics** (see GENERAL) or **theoretical linguistics**. When it concentrates on establishing the facts of a particular language system, it is called **descriptive linguistics** (see DESCRIPTION). When its purpose is to focus on the differences between languages, especially in a language-teaching context, it is called **contrastive linguistics** (see CONTRASTIVE (2)). When its purpose is primarily to identify the common characteristics of different languages or language families, the subject goes under the heading of **comparative** (or **typological**) **linguistics** (see COMPARATIVE (1)).

When the emphasis in linguistics is wholly or largely historical, the subject is traditionally referred to as **COMPARATIVE PHILOLOGY** (or simply **PHILOLOGY**), though in many parts of the world 'philologists' and 'historical linguists' are people with very different backgrounds and attitudes. The term **structural linguistics** is widely used (see STRUCTURAL), sometimes in an extremely specific sense, referring to the particular approaches to **SYNTAX** and **PHONOLOGY** current in the 1940s and 1950s, with their emphasis on providing **DISCOVERY PROCEDURES** for the analysis of a language's **SURFACE STRUCTURE**; sometimes in a more general sense, referring to any **SYSTEM** of linguistic analysis that attempts to establish explicit systems of **RELATIONS** between linguistic **UNITS** in surface structure. When the emphasis in language study is on the classification of structures and units, without reference to such notions as **DEEP STRUCTURE**, some linguists, particularly within **GENERATIVE** grammar, talk pejoratively of **taxonomic linguistics**.

In the later twentieth century the term **linguistic sciences** came to be used by many as a single label for both linguistics and **PHONETICS** – the latter being considered here as a strictly pre-language study. Equally, there are many who do not see the divide between linguistics and phonetics being as great as this label suggests: they would be quite happy to characterize the subject as **linguistic science**. 'Linguistics' is still the preferred name.

The overlapping interest of linguistics and other disciplines has led to the setting up of new branches of the subject in both pure and applied contexts, such as **anthropological linguistics**, **biolinguistics**, **clinical linguistics**, **computational linguistics**, **critical linguistics**, **developmental linguistics**, **ecolinguistics**, **educational linguistics**, **ethnolinguistics**, **forensic linguistics**, **geographical linguistics**, **institutional linguistics**, **mathematical linguistics**, **neurolinguistics**, **peace linguistics**, **philosophical linguistics**, **psycholinguistics**, **quantitative linguistics**, **sociolinguistics**, **statistical linguistics**, **theolinguistics** (see individual entries). When the subject's findings, methods or theoretical principles are applied to the study of problems from other areas of experience, one talks of **applied linguistics**; but this term is often restricted to the study of the theory and methodology of foreign-language teaching.

linguistic science(s) see LINGUISTICS

linguistic sign see SIGN (1)

linguistic substrate see SUBSTRATE

linguistic superstratum see SUPERSTRATUM

linguistic variable see VARIABLE (2)

link (*n.*) see CHAIN

linking (*adj./n.*) (1) A term used in PHONOLOGY to refer to a sound which is introduced between LINGUISTIC UNITS, usually for ease of pronunciation. In English, the **linking r** is the most familiar example of this process, as when the *r* in *car* is pronounced before a VOWEL, or when an /r/ is introduced without there being justification in the writing (e.g. *Shah of . . . /ʃɑ:rəv . . . /*). In French, a linking /t/ is introduced in the third-PERSON QUESTION form of VERBS, when this ends in a vowel, e.g. *il a* 'he has' → *a-t-il*. In SYNTAX, the COPULA *be*, and sometimes such verbs as *seem*, *become*, etc., may be referred to as **linking verbs**.

(2) In models of NON-LINEAR PHONOLOGY, a FORMAL means of relating UNITS (nodes, features, particles, etc.) within a HIERARCHICAL REPRESENTATION; the disassociation of a unit from a SEGMENT is called **delinking**. A **delinked** unit occurs on a TIER on its own. Units which are **linked** to more than one segment (as in the various kinds of ASSIMILATION, or in certain kinds of GEMINATION) are said to show **multiple linking** (or be **multilinked**). Various CONDITIONS have been proposed to ensure the WELL-FORMEDNESS of ASSOCIATION lines in STRUCTURAL DESCRIPTIONS, such as the **linking constraint**, which requires that all association lines be interpreted exhaustively.

(3) A family of CONSTRAINTS in OPTIMALITY THEORY, usually referred to as **LINK**, requiring that a FEATURE be associated to a CONSONANT or a VOWEL, whether or not the association is part of the lexical INPUT. For example, in a TONE language, LINK[TONE] would associate a tone with a vowel.

linking verb see LINKING (1)

LIPOC An abbreviation for 'language-independent preferred order of constituents' – a LINGUISTIC tendency recognized in FUNCTIONAL GRAMMAR, according to which CONSTITUENTS are ORDERED in terms of their CATEGORIAL COMPLEXITY.

lip rounding see ROUNDING

liquid (*n.*) A term used by some PHONETICIANS in the classification of speech sounds, referring collectively to all the APICO-ALVEOLAR sounds of the types [l] and [r].

listeme (*n.*) A term sometimes used in PSYCHOLINGUISTICS for the notion of a WORD or other expression as a member of a list of linguistic entities stored in the brain.

literacy (*n.*) The ability to read and write; it contrasts with **illiteracy**, the two poles now being seen to demarcate a continuum of ability. Discussion of the problem, either within a country or on a world scale, is complicated by the difficulty of measuring the extent of literacy in individuals. The notion of **functional literacy** was introduced in the 1940s, in an attempt to identify minimal levels of reading/writing efficiency in a society, such as being able to write one's name; but defining even minimal levels is difficult, especially today, with increasing demands being made on people to be literate in a wider range of contexts. National literacy campaigns in several countries have raised public awareness, and standards are slowly rising. **Biliteracy** is the ability to read and write in more than one language. The term 'literacy' is also now often used in a broader sense, referring to the ability to understand a technical or cultural domain, as in **computer literacy** and **graphic literacy**.

literary pragmatics see PRAGMATICS

literary stylistics see STYLISTICS

little pro see PRO

l-marking (*n.*) A term used in later GOVERNMENT-BINDING THEORY, distinguishing a category which is the COMPLEMENT of a V, N, A or P (**l-marked**) from one which is the complement of C or I. The symbol 'l' derives from 'lexical category'.

loan (*n.*) A LINGUISTIC UNIT (usually a LEXICAL ITEM) which has come to be used in a LANGUAGE or DIALECT other than the one where it originated. Several types of loan process have been recognized, such as **loan words** (where both FORM and MEANING are borrowed, or 'assimilated', with some adaptation to the PHONOLOGICAL system of the new language, e.g. *sputnik*); **loan blends** (where the meaning is borrowed, but only part of the form, e.g. *restaurant* with a simulated French ending /'restərɔ̃/); **loan shifts** (where the meaning is borrowed, and the form is native, e.g. *restaurant* as /'restrənt/); and **loan translations** (where the MORPHEMES in the borrowed word are translated item by item, e.g. *superman* from *Übermensch* – also known as a CALQUE).

local (*adj.*) A type of TRANSFORMATION, introduced by Noam Chomsky (in *Aspects of the Theory of Syntax*), which affects only a sub-STRING DOMINATED by a single CATEGORY symbol: the applicability of the RULE is thus determined by the PHRASE STRUCTURE of the string, not just by the SEQUENCE of elementary symbols of which the string is composed. For example, the way in which the rules of the transformational CYCLE in PHONOLOGY are applied to assign STRESS depends on the way the FORMATIVES are categorized, e.g. as NOUN, VERB, ADJECTIVE, etc., in the phrase-structure TREE. See also LOCALITY.

localism (*n.*) An approach to LINGUISTIC analysis which proposes that expressions of location (in space and time) are more basic to a GRAMMATICAL or SEMANTIC analysis than are other types of expressions, which are viewed as derived. In this **localist** view, distinctions such as TENSE, ASPECT, possession and existence are interpreted as having underlying locational features, as is most evident in

such relations as *John has a dog/John's dog . . .*, and *there are four legs on that table/that table has four legs*.

locality (*n.*) A term used in PHONOLOGY, especially in some NON-LINEAR models, to refer to the domain of application of a RULE. In one formulation, the **locality condition** states that phonological rules apply between elements ADJACENT on a given TIER. Non-linear phonology is especially interested in locality because its ability to handle non-adjacent SEGMENTS (as in vowel HARMONY) is one of its chief claims. Non-linear principles enable long-distance rules to operate between segments which are adjacent at a particular level of REPRESENTATION, even though the segments are not adjacent at all levels. **Locality theory** develops this approach into a general theory of phonological adjacency requirements. It is defined by a **universal locality condition**, which requires elements to be local within a PLANE (the 'adjacency parameter', which then allows rules to impose further CONSTRAINTS on the maximal distance between interacting segments) and by a principle of **transplanar locality** (which bans certain types of relations across featural planes).

local tree see TREE

location (*n.*) see HOLD

locative (*adj./n.*) (**loc, LOC**) In LANGUAGES which express GRAMMATICAL relationships by means of INFLECTIONS, this term refers to the FORM taken by a NOUN PHRASE (often a single noun or PRONOUN), when it typically expresses the idea of location of an entity or action. English does not have a locative CASE form ('a locative'), using such PREPOSITIONS as *at* instead. Structures which express locational MEANING may also be referred to as locative, e.g. in *The woman was standing at a bus stop*, *at a bus stop* could be called a 'locative PHRASE'. Some LINGUISTS see locative CONSTRUCTIONS as having particular importance in developing a LINGUISTIC theory, interpreting such notions as 'being', 'having', etc., as involving a fundamental locative feature. The term is also given special status in CASE grammar.

locus (*n.*) A term used in ACOUSTIC PHONETICS to refer to the apparent point of origin of a FORMANT for a given PLACE OF ARTICULATION, as displayed on a SPECTROGRAM. The formants which identify VOWELS are bent in characteristic directions, depending on the CONSONANTS adjacent to them; but for any single consonant these bends, or TRANSITIONS, all point in the same direction, at a hypothetical natural frequency range for the consonant. It is this hypothetical point of origin which is referred to as the locus (or, in later work, **locus space**) of the consonant. A **locus equation** is based on the onset FREQUENCY of the second formant and the steady-state value of that formant during the vowel in a consonant–vowel sequence. A linear regression is performed on these two variables for productions of the same consonant in different vowel contexts. The slope of the locus equation can be associated with the degree of COARTICULATION between the consonant and the vowel: a slope of 1 indicates maximum coarticulation (i.e. the onset and target frequencies of the second formant would be identical); a slope of 0 indicates no coarticulation.

locutionary (*adj.*) A term used in the theory of SPEECH ACTS to refer to an act of making a MEANINGFUL UTTERANCE. The point of the term is in its contrast with ILLOCUTIONARY and PERLOCUTIONARY acts, where there is more involved than merely 'speaking'.

logical consequence A term used in formal logic, and often encountered in SEMANTIC theory, for the relation between the premises of a VALID argument and its conclusion. A PROPOSITION p is a logical consequence of a proposition q if and only if there is a valid argument with q as its premise and p as its conclusion. The term is often understood to encompass only those cases where the argument is valid due to its general FORM, hence excluding examples of ENTAILMENT in which the meaning of non-LOGICAL CONSTANTS plays a crucial role.

logical constant A term used in formal logic, and often encountered in SEMANTIC theory, for those LEXICAL items which are considered part of the general FORM of an argument. The exact definition and membership of the set of logical constants is a matter of some debate, but it is typically understood to include at least the TRUTH FUNCTIONAL CONNECTIVES and QUANTIFIERS. In MODEL-THEORETIC SEMANTICS, logical constants are those EXPRESSIONS whose SEMANTIC VALUE does not vary from MODEL to model.

logical form (LF) A term used in a variety of SEMANTIC, SYNTACTIC and logical theories for a LEVEL of REPRESENTATION relevant to semantic interpretation, especially to those aspects of interpretation which play a role in determining ENTAILMENT and other logical relations. In GOVERNMENT-BINDING THEORY the term is used to refer to the initial REPRESENTATION of SENTENCE MEANING, which results from the SEMANTIC interpretation of CASE-MARKED S-STRUCTURES. It includes information about such matters as element FOCUS and QUANTIFIER representation. It is complemented in the semantic COMPONENT by a further LEVEL of semantic interpretation, known as 'full semantic representation', which is required to determine such matters as PRAGMATIC inference and the conditions governing a sentence's APPROPRIATE use.

logical truth A term used in logic, and often in SEMANTIC theory, for truth which is guaranteed by the principles of logic. This is usually understood to encompass only those SENTENCES which are true by virtue of their general FORM.

logocentrism (*n.*) In literary STYLISTICS, a term referring to a LANGUAGE- or WORD-centred view of literature or other behaviour. The notion is associated with the STRUCTURALIST approach to analysis, which focused on the study of the language of a text to the exclusion of the author's individuality, the social context and the historical situation. A reaction to this **logocentric** view in the late 1960s came to be called POST-STRUCTURALISM. Here, language is seen as a system whose value shifts in response to non-linguistic factors. A range of viewpoints drew attention to the multiple MEANINGS of words, stressing the role of mental processes in interpreting linguistic relationships, and denying the possibility of objectivity in textual interpretation. In particular, the methods of **deconstruction**, developed by Jacques Derrida (b. 1930), aimed to show the inherent contradictions and paradoxes in logocentric approaches.

logogram (*n.*) In the study of writing systems, a written or printed symbol which represents a WORD (or MORPHEME) in a LANGUAGE; also called a **logograph** or (in the case of Oriental languages) a **character**. The best-known examples of a logographic system are Chinese and its derivative script, Japanese kanji. The term must be used with care, as it suggests that only words are represented by the symbols, whereas meaningful parts of words (e.g. AFFIXES, ROOTS) are also included in the notion. Logograms in European languages include the numerals (1, 2, etc.) and many mathematical and scientific symbols.

logograph (*n.*) see LOGOGRAM

logophoric (*adj.*) see PRONOUN

London School see FIRTHIAN

long (*adj.*) see LENGTH (1)

long-distance dependency see UNBOUNDED DEPENDENCY

longitudinal (*adj.*) An application of the general use of this term in the field of child language ACQUISITION, referring to one of the two main procedures used in order to study the process of LANGUAGE development. A longitudinal study follows the course of language acquisition in a single child or group over a period of time. This method contrasts with a CROSS-SECTIONAL study, where the language of a group of children of the same or different ages is compared at a given point in time.

loopback A term in TAGMEMIC GRAMMAR for the inclusion of a higher-LEVEL CONSTRUCTION within the SLOTS of a lower-level construction, as in the use of RELATIVE CLAUSES within the NOUN PHRASE (e.g. *the girl who was talking . . .*); also called **backlooping**. It is distinguished from LEVEL-SKIPPING and LAYERING.

loss (*n.*) see LANGUAGE DEATH, LANGUAGE LOSS

loudness (*n.*) The attribute of auditory sensation in terms of which a sound may be ordered on a scale from soft to loud. It is an AUDITORY PHONETIC feature, corresponding to some degree with the ACOUSTIC features of **intensity** or **power** (measured in decibels (dB)), which in the study of speech is based on the size of the vibrations of the VOCAL CORDS, as a result of variations in air pressure. There is, however, no direct or parallel correlation between loudness (or 'volume') and intensity: other factors than intensity may affect our sensation of loudness; e.g. increasing the FREQUENCY of vocal-cord vibrations may make one sound seem louder than another. The linguistic use of loudness is of particular interest to the PHONOLOGIST, and this is studied under the heading of STRESS.

low (*adj.*) (1) One of the features of sound set up by Chomsky and Halle (see CHOMSKYAN) in their DISTINCTIVE FEATURE theory of PHONOLOGY, to handle variations in PLACE OF ARTICULATION (CAVITY features). Low sounds are a type of TONGUE-BODY feature, and defined ARTICULATORILY, as those produced by

lowering the TONGUE to below the level it holds in neutral position; OPEN VOWELS and the GLOTTAL FRICATIVES are [+low]. Its opposite is **non-low** [-low] or HIGH, referring to sounds produced without any such lowering; it thus covers MID and CLOSE vowels, and most CONSONANTS.

(2) **Low** describes the less formal variety in DIGLOSSIA; opposed to 'high'.

lower category A term used in GENERATIVE GRAMMAR to refer to a CATEGORY which has already been used in a TREE-diagram representation. The category that has been introduced later will appear to be lower down the tree than the earlier (HIGHER) category. Lower, or EMBEDDED, sentences (CLAUSES, VERB PHRASES, NOUN phrases, etc.) can be illustrated by *the car which I left in the street has been stolen*. It has occasionally been suggested that there are no lowering TRANSFORMATIONS, but lowering operations were assumed in later GOVERNMENT-BINDING THEORY.

lowering (*n.*) see RAISING (2)

low tone see TONE (1)

loyalty (*n.*) see LANGUAGE LOYALTY

LP rule see LINEAR PRECEDENCE RULE

ludic (*adj.*) A term sometimes used in LINGUISTICS to refer to LANGUAGE whose primary function is to be part of play, as in the nonsense, repetitive rhythms, and rhymes heard in children's games all over the world. **Ludicity** also affects adults, who may play with language by adopting silly tones of voice or by twisting words into unorthodox shapes to create a humorous effect (see LUDLING, VERBAL PLAY).

ludling (*n.*) A term used in an approach to the FORMAL definition of LANGUAGE games (e.g. play languages, speech disguises, secret languages); from Latin *ludus* ('play') + *lingua* ('language'). The focus is on the distinctive structure such games display. In particular, their MORPHOLOGICAL system is limited to a small number of operations superimposed on ordinary language (e.g. INFIXATION, SYLLABLE reversal), its AFFIXES are very few (often only one), and the added elements have no meaning. Ludling operations are seen as extensions of ordinary language processes (see RESTRICTED LANGUAGE), and their study has proved attractive in NON-LINEAR approaches to PHONOLOGY and morphology, where they are often referred to as part of the evidence supporting a particular theoretical construct (e.g. the notion of a SKELETAL TIER).