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ABBREVIATIONS AND SYMBOLS

A adjective; agent; argument

A any syntactic category (in A-binding, A-over-A Principle)

AA Afroasiatic; Austro-Asiatic

abbr. abbreviation

abl. ablative

abs. absolutive

acc. accusative

ACH Association for Computers and the Humanities

ACL Association for Computational Linguistics

act. active; actor

AD Alzheimer's dementia

adess. adessive

adj. adjective

ADJP adjective phrase

adv. adverb(ial)

ADVP adverbial phrase

AE Achaemenid Elamite

AGR agreement

agt. agent(ive)

AI Artificial Intelligence

ALLC Association for Literary and

Linguistic Computing

AM Ancient Mongolian

AMR Allomorphic Morphological Rule

AN Austronesian

an. animate

aor. aorist

AP adjective phrase

APG Arc Pair Grammar

API Association Phonétique

Internationale

A-position argument position

AR Arumanian

Ar. Arabic

Arm. Armenian

ART article

ASL American Sign Language

ASP aspect

ASR Automatic Speech Recognition

ATN Augmented Transition Network

ATR advanced tongue root

AUX auxiliary

Av. Avestan

BCE Before Common Era (= B.C.)

BEAM Brain Electrical Activity

Mapping

BI Bahasa Indonesia

BM Bahasa Melayu; Bokmål

BP bound pronoun; Brazilian

Portuguese

B.P. Before Present

BS Balto-Slavic

BVC bound verb complement

C complement; complementizer;

consonant

c. century

CA Classical Arabic; Componential Analysis; Contrastive Analysis;

Conversational Analysis

ca. circa, approximately

CAP Control Agreement Principle

CAT Computerized Axial Tomography

caus. causative

c-command constituent command

CD Communicative Dynamism;

Conceptual Dependency

CE Common Era (= A.D.)

CED Condition on Extraction Domain

CF Context-Free

CFG Context-Free Grammar

CFL Context-Free Language

chap. chapter

Ch.Sl. Church Slavic

сно chômeur (in Relational Grammar)

CL Classical Latin; compensatory

lengthening

clf. classifier

col. column

COMP complementizer

comp. comparative; complement

conj. conjunction; conjunctive

cont. continuative

cop. copula

CP Complementizer Phrase; Cooperative Principle

CR Comparative Reconstruction

CS Context-Sensitive

CSR Contemporary Standard Russian

c-structure constituent structure

CV cardinal vowel; consonant-vowel (syllable structure)

D dative; derivational; determiner; diacritic feature; dictionary

d. died

Da. Danish

DA Discourse Analysis

DAF delayed auditory feedback

dat. dative

dat.-acc. dative-accusative

DCG Definite-Clause Grammar

DD developmental dysphasia

decl. declension

def. definite

dem. demonstrative

deriv. derivative

desid. desiderative

DET determiner

dim. diminutive

dir. direction(al)

DM discourse marker

DO direct object

DP Determiner Phrase

DR Daco-Rumanian; discourse representation

DRS Discourse Representation Structure

DS marking Different Subject

D-structure an alternative conception to 'deep structure'

DTC Derivational Theory of Complexity

DTW Dynamic Time Warping

du. dual

DV dynamic verb

be empty category

E externalized

EA Eskimo-Aleut

ECP Empty Category Principle

emph. emphaticencl. encliticEng. English

ENHG Early New High German

EP European Portuguese

EQUI Equi-NP Deletion

erg. ergative

EST Extended Standard Theory

etc. et ceteraex. exampleexx. examplesF fall; formant

f. feminine; and following

F-R fall-rise

f-structure functional structure

F₀ fundamental frequency

Fa. Faliscan fact. factive

FCR Feature Cooccurrence Restriction

fem. feminine

ff. and following (plural)

fig. figure

fl. floruit, flourished, lived

FLRP Fixed Language Recognition

Problem

FN first name **foc.** focus

Fr. French

FSD Feature Specification Default

FSP Functional Sentence Perspective

fut. futureG gender; glideGael. Gaelic

GB Government/Binding

G/D genitive/dative

gen. genitive
Ger. German
ger. gerund
Gk. Greek

Gmc. Germanic

Go. Gothic

GPC grapheme-phoneme conversion

GPSG Generalized Phrase Structure

Grammar

GR Grammatical Relation

GS Generative Semantics

Guj. Gujarati

H hearer; high; hold (ASL)

habit. habitualHitt. HittiteHM Hmong-Mienhon. honorific

HPSG Head Driven Phrase Structure Grammar

HR high rise

Hz Hertz (cycles per second)

I inflection; internalized

IA Indo-Aryan; Item-and-Arrangement

IC Immediate Constituent; Inherent Complement

ICA Initial Consonant Alternation

ICM Idealized Cognitive Model

ID Immediate Dominance

IE Indo-Europeaniff if and only if

IG intonation group

II Indo-Iranian

IL Intensional Logic

ill. illative

imper. imperative

impers. impersonal

impf. imperfect(ive)

inan. inanimate

incl. including, inclusive

ind. independent indef. indefinite

indic. indicative

inf. infinitive

INFL inflection

inst. instrumental

interj. interjection

intrans. intransitive

invol. involuntary

IO indirect object

IP Inflection Phrase; Item-and-Process

IPA International Phonetic Association or Alphabet

IR Internal Reconstruction

Ir. Iranian

irreg. irregular

IS Interactional Sociolinguistics

Ital. Italian

KA Krama Andhap (= Middle

Javanese)

KI Krama Inggil (= High Javanese)

km kilometer(s)

L language; location (ASL); low

L1 first language

L2 second language

LA Latin America; linguistic area

La. Latin; Latvian

LAD Language Acquisition Device

LBH Late Biblical Hebrew

LF Lexical Function; Logical Form

LFG Lexical-Functional Grammar

LGA Local Government Area

LH left hemisphere

Lh. Lhasa

Li. Lithuanian

LIC lower incisor cavity

LIPOC language-independent preferred order of constituents

lit. literally

Lith. Lithuanian

LM Literary Mongolian

l-marking marking a lexical category

LN last name

loc. locative

LP Language Planning; Linear Precedence

LPC Linear Prediction Coefficient

LR low rise

LSA Linguistic Society of America

LSP Language for Specific Purposes

LU lexical unit

Lyc. Lycian

M mid; movement (in ASL); modal; mot (in Metrical Phonology)

m. masculine

MA Meso-American

masc. masculine

m-command maximal command

MCS Mildly Context-Sensitive

MDP Minimal Distance Principle

ME Middle English

MG Montague Grammar

MH Middle/Mishnaic Hebrew

MHG Middle High German

MIA Middle Indo-Aryan

mid. middle

MIT Massachusetts Institute of

Technology

MK Mon-Khmer

MLU mean length of utterance

MM Middle Mongolian

Mod. modern

Mod.E. Modern English

MOP Maximal Onset Principle

MP Malayo-Polynesian; Middle

Persian

MPR Mongolian People's Republic; morphophonological rule

ms millisecond

ms. manuscript

MSA Modern Standard Arabic

MSC Morpheme Structure Constraint

MSK Modern Standard Khmer

mss. manuscripts

MST Modern Standard Telugu

MT Machine Translation

N noun; number

n. note

NA North America; Northern Athabaskan

N/A nominative/accusative

NC Niger-Congo

NCC North Central Caucasian

n.d. no date

SV stative verb

SWITCH switch reference

syn. synonym, synonymous

Sw. Swedish

NE New English (= Modern English) PDP Parallel Distributed Processing rev. revised neg. negative Per. Persian **R-expression** referring expression neut. neuter perf. perfect(ive) **RG** Relational Grammar **Ng.** Ngoko (= colloquial Javanese) pers. person RH right hemisphere NGP Natural Generative Phonology **PET** Positron Emission Tomography RN Relational Network NHG New High German **PF** Phonetic Form RP Recognition Problem; Received NIA New Indo-Aryan pf. perfect(ive) Pronunciation; referential pronoun NL natural language PGmc. Proto-Germanic RR Readjustment Rule Phryg. Phrygian NLI Natural Language Interface R-rule Redundancy Rule NLP Natural Language Processing PIE Proto-Indo-European RT reading tradition NM Natural Morphology Pkt. Prakrit RTN Recursive Transition Network NN Nynorsk pl. plural Ru. Russian No. Norwegian PLD Primary Linguistic Data S sentence; speaker; subject nom. nominative PLu. Proto-Luvian SA stem augment NOM nominal(ization) plupf. pluperfect **SAAD** simple active affirmative PM phrase-marker; Proto-Mayan nonfin. non-finite declarative (sentence) NP New Persian; noun phrase PN predicate nominal SBH Standard Biblical Hebrew NS Nilo-Saharan PNC Proto-Niger-Congo SC small clause; South Caucasian; n.s. new series PNI Proto-Northern Iroquoian Structural Change NWC Northwest Caucasian POc. Proto-Oceanic Sc. Scandinavian O object Pol. Polish SCC Strict Cycle Condition obj. object pol. polite SD South Dravidian; Structural obl. oblique poss. possessive Description obs. obsolete postpos. postposition SEA Southeast Asia(n) OCS Old Church Slavic PP prepositional phrase sec. secondary; section OE Old English PR Phonological Representation; series ser. OG Old Georgian Phonological Rule **SFH** Semantic Feature Hypothesis OHG Old High German PRED predicate SG Stratificational Grammar; Standard OI Old Iranian pref. prefix Gujarati OIA Old Indo-Aryan preposition prep. sg. singular OK Old Khmer pres. present SGML Standard Generalized Markup OM object marker prev. preverb Language ON Old Norse PRO pronoun, pronominal SH Standard Hausa OP Old Persian; Old Portuguese; Old prog. progressive SHWNG South Halmahera-West New Prussian pron. pronoun Guinea OP null operator prt. particle Skt. Sanskrit OPer. Old Persian P-rule phonological rule Sl. Slavic opt. optative PS Phrase Structure; Preference SM series marker ORuss. Old Russian Semantics soc. sociative Os. Oscan PSG Phrase-Structure Grammar SP Semantic Parsing; subject pronoun o.s. old series PST Proto-Sino-Tibetan Sp. Spanish OT Optimality Theory PT patient-trigger; Proto-Tai SPE The Sound Pattern of English person; patient; phrase; predicator; PTB Proto-Tibeto-Burman SS marking Same Subject marking preposition; position (in ASL) Q quantifier; question S-structure shallow structure PA Proto-Australian QH Qumranic Hebrew ST Sino-Tibetan PAE Proto-Athabaskan-Eyak q.v. quod vide, which see stat. stative PAN Proto-Austronesian qq.v. quae vide, which see (plural) sub. subordinator PAn. Proto-Anatolian R root SUBCAT subcategorization PAS Preferred Argument Structure RC relative clause subj. subject pass. passive RE Recursively Enumerable subjunc. subjunctive pat. patient real. realis subord. subordinate, subordinative PC pronominal clitic redup. reduplication subst. substantive PCA Pacific Coast Athabaskan refl. reflexive superess. superessive PCF Phonetically Consistent Form rel. relative SUR Speech Understanding Research

pcl.particlerem.remotepcpl.participlerepr.reprintedPCUPreferred Clause UnitRESTRevised Extended StandardPDProto-DravidianTheory

viii ABBREVIATIONS AND SYMBOLS

Syr. Syriac ot trace

 \mathbf{T} title; tu (familiar address)

TAP tense-aspect pronoun (Hausa)

TB Tibeto-Burman
TBU Tone-Bearing Unit

TG Transformational Grammar; Tupí-

Guaraní **Tib.** Tibetan **TK** Tai-Kadai

Toch. Tocharian

TOP topic

tr. transitive

trans. transitive **trig.** trigger

T-rule transformational rule

TV transitive verb

U utterance UA Uto-Aztecan

UC ultimate constituent

UG Universal Grammar

Ukr. Ukrainian Um. Umbrian

URP Universal Recognition Problem

V verb; vowel; vous (polite address)

Ved. Vedic (Sanskrit)

ver. version

VH vowel harmony

VL Vulgar Latin

voc. vocative

vol. volume

VOT voice-onset time

VP verb phrase

W word

WFR Word-Formation Rule

WH Western Hausa

wn-word question-word (what, etc.)

W* language non-configurational

language

WMP Western Malayo-Polynesian

WP Word-and-Paradigm

WT Western Tibetan

X any syntactic category (in X-Bar Theory)

Ø zero (covert element)

1 first person; subject (Relational Grammar)

2 second person; direct object (Relational Grammar)

3 third person; indirect object (Relational Grammar)

* non-attested form (hypothetical or reconstructed); Kleene star

< comes from

> becomes

→ is rewritten as (phrase structure rule)

⇒ is transformed into

α alpha, a variable

Δ delta, a dummy element in syntax

μ theta, thematic (role)

σ sentence; syllable

Σ sentence; stress

E



ETHNOGRAPHY OF SPEAKING. This methodological approach to investigating the relationships among language, culture, and society involves both theoretical and methodological perspectives. It describes in cultural terms the patterned uses of language and speech in a particular group, institution, community, or society. It includes native theories and practices of speaking, both as overtly articulated by individuals and as enacted by them in a range of situations.

More specifically, the ethnography of speaking is concerned with the following:

- (a) The sociolinguistic resources available in particular communities. Such resources include not merely grammar in the conventional sense, but also a complex of linguistic potentials for social use and social meaning—variables, styles, terms of reference and address, and words and their relations.
- (b) The use and exploitation of these resources in discourse (speech acts, events, and situations), and in social interaction: agreeing, disagreeing, showing deference and respect, greeting, and cajoling.
- (c) The patterned interrelationships and organizations of the various types of discourse and social interaction in the community.
- (d) The relationship of these patterns of speaking to other aspects and domains of the culture of the community, such as social organization, religion, economics, and politics.

A complete ethnography of speaking would deal with each of these topics; however, most research and publications tend to focus on particular ones—e.g. the description of linguistic resources organized as styles or ways of speaking (gendered language, baby talk); the analysis of particular speech events (greetings, drinking

encounters); or the role of speaking in a particular segment of social life (politics, religion).

The ethnography of speaking began in the early 1960s with a series of papers by Dell Hymes, who called for an approach to language and speech which dealt with the aspects of language use that fall between, or otherwise escape, such established disciplines as anthropology, linguistics, and sociology (see Hymes 1974). Essentially, his argument was that language and speech have a patterning of their own, like social organization, politics, religion, and economics; therefore, they merit attention by anthropologists. This patterning is not identical with the grammar of the language, in the traditional sense; yet it is linguistic as well as cultural in organization, and thus merits attention by linguists.

Hymes introduced the notion of the *speech event* as central to the ethnography of speaking. He argued that analysis of speech events requires study of the interrelationships of many components or factors; these may include setting, participants, purposes, verbal or textual organization in terms of constituent acts, *key* or manner of delivery, the linguistic varieties used, norms of interaction, and genres. The careful study of these components of speaking in their own terms—with regard to their terminology, patterned organization, and function—leads to a description that captures each society's unique cultural organization of language and speech.

Collections of papers published beginning in the late 1960s and early 1970s helped to develop this field (Gumperz and Hymes 1964, 1972, Bauman and Sherzer 1989). These articles describe aspects of language and speech that have important consequences for the organization of social life, but that had often been overlooked or treated as marginal by anthropologists, sociologists, and linguists. Some titles indicate their focus: "Baby talk in six languages"; "How to ask for a drink in Subanun";

"'Rhetoric', 'Logic', and 'Poetics' in Burundi: Culture patterning of speech behavior"; "Sequencing in conversational openings"; "Signifying and marking: Two Afro-American speech acts"; "Social meaning in linguistic structures: Code-switching in Norway." Important discussions have been initiated about local notions of self, strategies of interpretation, speakers' ability to control interpretation, the relevance of "sincerity," intentionality, and the organization of responsibility for interpretation cross-culturally.

Although research in the ethnography of speaking continues to be based on its original assumptions and goals, certain specialized foci have emerged. These include intercultural and interethnic communication and miscommunication (Gumperz 1982); the traditional verbal arts of nonliterate peoples (Hymes 1981); the relationship between oral and written discourse; the acquisition of communicative competence (Schieffelin and Ochs 1986); the construction of social hierarchies (Keating 1998); language and politics; and language use within institutional settings such as education, law, or medicine. Other areas of special interest include language and gender, linguistic ideologies (Kroskrity 2000; Schieffelin, Woolard, and Kroskrity 1998), discourse and the landscape, identity, sign language, gesture and spatial relationships, multilingualism, and language and technology.

Recent studies by scholars who incorporate the ethnography of speaking along with other approaches show far greater integration of some of the fields originally cited by Hymes as important: anthropology, linguistics, sociology, folklore, and psychology. Examples are Duranti and Goodwin 1992 and Gumperz and Levinson 1996.

The research methods of the ethnography of speaking integrate those of sociolinguistics with those of social and cultural anthropology, in a unique constellation. From sociolinguistics is borrowed the assumption of a heterogeneous speech community, and the concern with collecting and analyzing a selection of representative forms of speech within it. From social and cultural anthropology is adopted the assumption of cultural relativity, and the concern with an emic or native insider's view, as well as the necessity of eliciting and analyzing native terms and concepts for ways of speaking, in the context of participant-observation. Also anthropological is the ethnographic method of constant interpretation relating ways of speaking to one another, and situating them in the contexts from which they derive meaning, and to which they contribute meaning.

Videotaping is an important new resource in describing communicative behaviors. The video camera has enabled research in nonverbal behavior, such as gesture and the role of the body in communicative practice, as well as research in sign language interactions.

One special feature of the ethnography of speaking is that it has been discourse-centered since its inception. It studies the speech acts, events, and situations—everyday and informal, in addition to formal and ritual—that constitute the social, cultural, and especially verbal life of particular societies. This involves attention to the relationship between text and context, as well as among transcription, translation, analysis, and theory. Discourse is considered to be the focus of the relationship among language, culture, society, and individual—the place where culture is conceived and transmitted, created and re-created.

The basic theoretical contribution of the ethnography of speaking is the demonstration that there are coherent and meaningful patterns in language use and speaking practices in societies around the world, and that there are significant differences in these patterns across cultures. The role of language in society cannot be taken for granted; nor can it be intuited on the basis of one's own experience, or projected from a single language, culture, or society onto another.

[See also Anthropological Linguistics; Discourse; and Sociolinguistics.]

BIBLIOGRAPHY

Bauman, Richard, and Joel Sherzer, eds. 1989. *Explorations in the ethnography of speaking*. 2d ed. Cambridge and New York: Cambridge University Press.

Duranti, Alessandro, and Charles Goodwin, eds. 1992. *Rethinking context: Language as an interactive process*. Cambridge: Cambridge University Press.

Gumperz, John J. 1982. *Discourse strategies*. Cambridge and New York: Cambridge University Press.

Gumperz, John J., and Dell Hymes, eds. 1964. *The ethnography of communication.* (American Anthropologist 66.6, part 2.) Menasha, Wis.: American Anthropological Association.

Gumperz, John J., and Dell Hymes, eds. 1972. *Directions in sociolinguistics: The ethnography of communication*. New York: Holt, Rinehart, and Winston.

Gumperz, John J., and Stephen Levinson, eds. 1996. Rethinking linguistic relativity. Cambridge: Cambridge University Press.
Hill, Jane, and Judith Irvine, eds. 1993. Responsibility and evidence in oral discourse. Cambridge: Cambridge University Press.

Hymes, Dell. 1974. Foundations in sociolinguistics: An ethno-

graphic approach. Philadelphia: University of Pennsylvania Press.

Hymes, Dell. 1981. "In vain I tried to tell you": Essays in Native American ethnopoetics. Philadelphia: University of Pennsylvania Press.

Keating, Elizabeth. 1998. Power sharing: Language, rank, gender, and social space in Pohnpei. New York: Oxford University Press.

Kroskrity, Paul, ed. 2000. Regimes of language: Ideologies, polities, and identities. Santa Fe: School of American Research Press.

Schieffelin, Bambi B., and Elinor Ochs, eds. 1986. *Language* socialization across cultures. Cambridge and New York: Cambridge University Press.

Schieffelin, Bambi, Kathryn Woolard, and Paul Kroskrity, eds. 1998. *Language ideologies: Practice and theory*. New York: Oxford University Press.

ELIZABETH KEATING AND JOEL SHERZER

ETHNOPOETICS. The term *ethnopoetics* was introduced with the journal *Alcheringa* (1970–1978). Such a term suggests an intersection between a general subject (in this case, verbal art) and something anthropological. Ideally, ethnopoetics is an intersection of all fields concerned to discover local knowledge and practice of verbal art, and to represent and interpret them (Sherzer and Woodbury 1987:2).

Oral literature and verbal art are older, established terms; and rhetoric and poetics may be used without the modifier ethno-. Ethnopoetics especially identifies work in which there is close attention to linguistic detail and verbal form, and experimentation with ways of reflecting on the page something of an oral original—both as regards expressive uses of the voice (as in Tedlock 1972) and as regards the cohesion and shape of a performance or text as a whole (Hymes 1981).

A central premise of ethnopoetics is the universality of the *line*. Until recently, only song texts and such highly marked genres as the couplets of Middle America and Indonesia were taken to be poetry, consisting of sets of lines. Narratives were assumed to be prose, and were published in often arbitrary paragraphs. Even the dramatic significance of turns at talk has often been obscured, jumbled together within a block of print. Now it is widely recognized that oral discourse commonly consists of lines. Where a narrative can be heard, attentive listening for intonation units (or tone groups), whether on recordings or in daily life, makes lines clear. For narratives known only in writing, other relationships may

indicate the presence of lines. The general principle was stated by Jakobson 1960: the recurrence of any feature of language may mark segments as equivalent for the purposes of poetic form. We are familiar with recurrences, within lines, of features such as stress, initial consonants, vowel length, and tone—and, between lines, with rhyme and grammatical parallelism. Syntactic particles are common markers of the start of lines in oral narrative. A turn at talk is regularly a distinct unit.

Lines of oral narrative often do not have an internal scheme or metric. Rather, they usually enter into an external scheme, a measure that relates them to one another. This can be seen in the way the following lines, linked only loosely by 'and', appear in the English version of "Coyote steals fire," told by Julia Starritt in Karok (Bright 1979):

And so then he arranged them,
the people,
he arranged all the swiftest people.
And he told them:
"You sit a little ways upriver,
and you other one, sit like that a little
farther upstream"—
eventually they reached [all the way]
upriver,
they reached the northern people's
country.

And to the first one, Frog, he said:
"Sit on the river bank."
And up on the mountain top, he said:
"Turtle, sit here."

But whenever and introduces an action or a turn at talk, it marks the beginning of a verse. The four verses constitute a stanza, and a scene, within the whole. (Within the stanza, the first pair has to do with people in general, while the second singles out actors crucial to the outcome.) The narrative is a set of overlapping arcs of lines, verses, stanzas, scenes, and acts.

More and more oral traditions are being found to have such architecture. There seem to be just a few alternative principles: pairs and fours (as in the example), with a "this, then that" rhythm; threes and fives, with a "this, then this, then that" rhythm; and combinations, such as one in which pairs come in sets of three. Where pairing is normal, a set of three may mark intensification; where three and five are normal, pairing may mark intensification. These relationships of onset and outcome are usually out of awareness. Nonetheless, they are not fixed grids, but options that narrators use to give point, proportion,

4 ETHNOPOETICS

and shape. Some Native American narrators switch from relations of four to relations of five to highlight male activity (Hymes 1998), or from relations of three and five to relations of four to focus on a woman or control by a woman (Hymes 2000). The general principle was stated by Burke 1925: a work of verbal art is shaped by the arousal and satisfying of expectation.

Most published work on ethnopoetics has been concerned with indigenous languages of the Americas; however, the same principles have been found to hold for materials in a variety of languages from the Old World, Africa, and Asia, as well as in English.

Ethnopoetics contributes to the teaching and interpretation of indigenous literatures (cf. Swann and Krupat 1987). The display of lines and sets of lines, and the visual highlighting of quoted speech, may make intelligible and, often enough, exciting-material whose point, pacing, and proportion were previously unclear. Ethnopoetics is a starting-point for poets who find stimulation in "primitive" material, and who seek to retranslate or rework it (cf. Tedlock 1983; Hymes 1981, Chap. 1). It can be an integral part of understanding another way of life (Basso 1985, Briggs 1988). To linguistics, ethnopoetics contributes a dimension of cohesion, and illuminates the discourse function of grammatical elements; it gives evidence of cognitive activity (planning, remembering) and of language as interactional accomplishment (Tedlock 1983, Sherzer and Urban 1986). It may point toward a general conception of grammar. Oral performance calls on two interdependent spheres of elements and relationships, one *propositional* (grammar as usually pursued), one presentational (cf. Woodbury 1987).

Organization in lines and sets of lines is likely to prove universal. That universality, along with the apparent limitation of principles of organization to just a few alternatives, suggests an innate basis and the kind of modularity internal to language. Yet the display of such competence is highly sensitive to situation. The opportunity to acquire and develop it beyond its rudiments was once perhaps universal in human communities, but is vulnerable to social change. Ethnopoetics brings together the biological and cultural starting points for the study of language.

[See also Anthropological Linguistics; Discourse; Linguistics and Literature; and Sociolinguistics.]

BIBLIOGRAPHY

Basso, Ellen B. 1985. A musical view of the universe: Kalapalo myth and ritual performances. Philadelphia: University of Pennsylvania Press.

Briggs, Charles. 1988. Competence in performance: The creativity of tradition in Mexicano verbal art. Philadelphia: University of Pennsylvania Press.

Bright, William. 1979. A Karok myth in 'measured verse': The translation of a performance. *Journal of California and Great Basin Anthropology*. 1.117–123. Reprinted in William Bright, *American Indian linguistics and literature* The Hague: Mouton, 1984, pp. 91–100.

Burke, Kenneth. 1925. Psychology and form. *The Dial* 79: 1.34–45. Reprinted in Kenneth Burke, *Counterstatement*. New York: Harcourt Brace, 1931, pp. 38–56.

Hymes, Dell. 1981. "In vain I tried to tell you": Essays in Native American ethnopoetics. Philadelphia: University of Pennsylvania Press.

Hymes, Dell. 1998. Reading Takelma texts. Bloomington, Indiana: Trickster Press.

Hymes, Dell. 2000. Variation and narrative competence. In *Thick corpus: Organic variation and textuality in oral tradition*, edited by Lauri Honko, pp. 77–92. Helsinki: Finnish Literature Society.

Jakobson, Roman. 1960. Linguistics and poetics. In *Style in language*, edited by Thomas A. Sebeok, pp. 350–377. Cambridge, Mass.: MIT Press.

Sherzer, Joel, and Greg Urban, eds. 1986. *Native South American discourse*. Berlin: Mouton de Gruyter.

Sherzer, Joel, and Anthony C. Woodbury, eds. 1987. *Native American discourse: Poetics and rhetoric.* Cambridge and New York: Cambridge University Press.

Swann, Brian, and Arnold Krupat, eds. 1987. *Recovering the word: Essays on Native American literature*. Berkeley: University of California Press.

Tedlock, Dennis. 1972. Finding the center: Narrative poetry of the Zuni Indians. New York: Dial. 2d ed., Lincoln: University of Nebraska Press, 1978.

Tedlock, Dennis. 1983. The spoken word and the work of interpretation. Philadelphia: University of Pennsylvania Press.

Woodbury, Anthony C. 1987. Rhetorical structure in a Central Alaskan Yupik Eskimo traditional narrative. In Sherzer and Woodbury 1987, pp. 176–239.

DELL HYMES

with the referential meanings of linguistic expressions across cultures and languages. The term *ethnosemantics*, or *ethnographic semantics*, has also been used more narrowly to refer to the projects elaborated during the 1960s by anthropologists working in the tradition of *ethnoscience*, the anthropological expression of the cognitive science "revolution," which is now known as *cognitive anthropology* (D'Andrade 1995). Ethnoscience

promoted an ethnography based on explicit and replicable methodology and mathematically precise theory, but, at the same time, *emic* (representing the native point of view). Cultures were characterized as knowledge systems, or, to paraphrase Goodenough 1956, as "what one needs to know to act appropriately" as a member of that culture. Cultures as bodies of knowledge are most readily accessible through the semantics of the native languages of the culture bearers. The vocabulary of a language is a cultural inventory, while texts reveal cultural presuppositions and modes of inference.

Since the 1960s, cognitive anthropologists have pursued a middle course between the philosophical poles of nominalism and realism, between the radical relativism of the postmodern critique and Chomsky's view that "the apparent richness and diversity of linguistic phenomena is illusory and epiphenomenal" (1995:8). Cognitive anthropology via ethnosemantic analysis attempts to assess the limits of linguistic relativity by theorizing the universal logical, perceptual, and adaptive constraints on human understandings of the world. For example, the claim that Inuit speakers employ a multitude of words to describe what for English speakers is just 'snow' is neither accepted uncritically, presuming the phenomenological basis for conceptual understanding, nor dismissed as a "hoax," presuming that human languages are hardwired conceptually. Rather, an ethnosemantic analysis of Inuit understandings of 'snow' would be based on systematic empirical observations of how Inuit people talk about those phenomena (in fact, the Inuit 'snow' vocabulary is much more elaborate than that of nonspecialist English).

Ethnosemantics first addressed referential kinship terminologies, borrowing the strategy of *componential analysis* from structural linguistics. A set of kin terms was analyzed as a semantic space structured by intersecting semantic dimensions (e.g. sex of referent, generation), each of which was composed of a set of contrasting semantic features (e.g. male, female; +1, +2). The goal was to define each kin term as a logical conjunction (set intersection) of features. However, the componential paradigm proved inadequate for this task—and entirely inappropriate for analyzing other domains, such as color, spatial reference, biology, illness, emotion, and personality.

In the 1970s, the initial emphasis on componential analysis gave way to a search for varied models appropriate to the substantive referential content of specific domains, and more sensitive to the complexities of terminological usage in natural speech contexts. Kinship

terminologies may now be analyzed elegantly using Atkins's 1974 General Relational Algebra for Investigating Kinship (GRAFIK), which synthesizes features of componential analysis with an algebra of relations akin to that pioneered by Floyd Lounsbury.

Berlin and Kay 1969 defined a new direction in the anthopological study of color naming through an analysis of universals and "evolutionary" patterns in this domain. They challenged the Whorfian view that color classifications varied widely across languages and showed that ethnosemantic research is not essentially particularistic. They used the Munsell Color Chart as an etic grid to compare color classifications systematically across 98 languages. Basic color terms (e.g. red, but not scarlet, reddish, or bay) were first elicited; then their foci and ranges were mapped by native speakers. The number of basic terms has been shown to vary systematically among languages; however, the foci or best examples of each category are virtually invariant across languages, suggesting a neurophysiological constraint. To model the internal structure of basic color concepts, that is, a prototypical focal range of hue and brightness centered in a peripheral region (pure red vs. reddish), Kay and Mc-Daniel 1978 applied a more general mathematical scheme—that of fuzzy set theory.

It is now widely recognized that many conceptual domains are more appropriately characterized by prototypes than by necessary and sufficient features. Coleman and Kay 1981 dissected the English word *lie* 'falsehood', isolating three semantic criteria that contribute to a native speaker's judgment that a situation involves a "lie." The prototypical lie exhibits all three. Situations lacking one or two of these criteria are either 'sort of a lie' or 'like a lie'. The analysis of *hedges* (e.g. 'sort of', '-ish') suggests the complexity of non-prototypical meanings. Ethnosemantic analysis of *metaphor* requires that semantic features be differentiated by role, that is, criterial vs. statistically normative features, and linguistic usage by function, that is, semantic vs. pragmatic.

Lakoff and Johnson 1980, 1999 develop a perspective on linguistic meaning as metaphor, which they elaborate as a conceptual system rooted in "embodied experience." They show how abstract notions such as 'anger' and 'theory' are understood by English-speakers with reference to a complex of more concrete mechanisms, such as 'boiler's and 'warfare'. They reject traditional Western philosophical approaches to meaning as disembodied abstraction. The appreciation of metaphor as a creative rhetorical trope, from Aristotle to the Western Apache

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(Basso 1990), suggests the universality of metaphorical "reasoning."

Wierzbicka 1992 refines a novel variant of componential analysis that she has applied to a range of semantic domains. She rejects the etic features that figured in earlier componential analyses in favor of a finite set of semantic primes—expressible in the everyday vocabularies of all languages—that may be used in various combinations to define more complex terms of a language, as well as serving as the basic vocabulary of a universal semantic meta-language.

Folk-biological nomenclature has been analyzed primarily in taxonomic terms (Berlin 1992). In the restricted ethnobiological sense defined by Paul Kay, a taxonomy is a hierarchy of sets of organisms related by set inclusion with associated names. Alternatively, a modal-theoretic definition would consist of hierarchies of constitutive rules. It is agreed, however, that folk-biological classifications reflect "general principles of classification and nomenclature" grounded in the structure of nature, and that these classifications are hierarchical like the Linnaean taxonomy of Western biological science. Folkbiological taxonomies, in Berlin's scheme, are built upon a set of basic "natural" categories (e.g. oak, cobra), plus derivative superordinate life-forms (tree, snake) and folk specifics (live oak, king cobra). Whether this hierarchic scheme is universal is the subject of debate; however, the close correspondence of basic folk taxa with scientific species suggests that the cultural recognition of biological species is constrained by, though not entirely predictable from, discontinuities in nature (Hunn 1982).

This is particularly true of taxa more and less inclusive than the basic level of "folk generics." Research in the late 1990s has been directed toward accounting for the differences among these systems in terms of considerations of mental economy and of culturally specific "utility." Atran 1998 claims that folk-biological classification, as well as folk "theories" of living things, have a genetic basis in a "mental module" that directs the acquisition of biological understandings in all languages. Hirschfeld and Gelman 1994 explore the notion that mental modules may structure culture knowledge in a variety of domains, informing folk theories not only of biology but also of physics, psychology, and sociology (as in "racial" typologies).

Artificial intelligence, especially in the work of Schank and Abelson 1977, has inspired a new brand of ethnosemantic analysis in the 1980s. This work focused on

events, scripts, plans, goals, and themes as fundamental units of cultural understanding, rather than on lexemes and semantic domains. Events and plans are not structured by intersecting semantic dimensions; instead, the component units of events and plans are analogous to the functional components of sentences—actions or states, actors in various roles, time and space relations, instruments, etc. (Jackendoff 1983). Emphasis falls on what knowledge must be presupposed in order to make sense of a narrative, or of the events it describes—and on the networks of logical inference that link events into meaningful sequences of action. Notable examples of this research direction include Hutchins's 1980 demonstration of the inferential consistency of Trobriand legal discourse: Naomi Quinn's abstraction of American cultural themes from extended texts on marriage (see Holland and Quinn 1987); and analyses of concepts of illness and of personality in several cultures.

Roy D'Andrade's "folk model of the mind" (in Holland and Quinn 1987) demonstrates that ethnosemantic analysis may be directed reflexively at the activity of ethnosemantics itself.

[See also Anthropological Linguistics; Metaphor and Semantics; and Semantics.]

BIBLIOGRAPHY

Atkins, John R. 1974. GRAFIK: A multipurpose kinship metalanguage. In *Genealogical mathematics*, edited by Paul A. Ballonoff, pp. 27–51. The Hague: Mouton.

Atran, Scott. 1998. Folk biology and the anthropology of science: Cognitive universals and cultural particulars. *Behavioral and Brain Sciences* 21.547–609.

Basso, Keith H. 1990. "Wise words" of the Western Apache: Metaphor and semantic theory. In Keith Basso, Western Apache language and culture: Essays in linguistic anthropology, pp. 53–79. Tucson: University of Arizona Press.

Berlin, Brent. 1992. *Ethnobiological classification*. Princeton, N.J.: Princeton University Press.

Berlin, Brent, and Paul Kay. 1969. *Basic color terms: Their universality and evolution*. Berkeley: University of California Press.

Chomsky, Noam. 1995. *The Minimalist Program.* Cambridge, Mass.: MIT Press.

Coleman, Linda, and Paul Kay. 1981. Prototype semantics: The English word *lie. Language* 57.26–43.

D'Andrade, Roy. 1995. *The development of cognitive anthro*pology. Cambridge and New York: Cambridge University Press.

Goodenough, Ward. 1956. Componential analysis and the study of meaning. *Language* 32.195–216.

Hirschfeld, Lawrence A., and Susan A. Gelman. 1994. *Mapping the mind: Domain specificity in cognition and culture*. Cambridge and New York: Cambridge University Press.

Holland, Dorothy, and Naomi Quinn, eds. 1987. *Cultural models in language and thought*. Cambridge and New York: Cambridge University Press.

Hunn, Eugene. 1982. The utilitarian factor in folk biological classification. *American Anthropologist* 84.830–847.

Hutchins, Edwin. 1980. *Culture and inference: A Trobriand case study.* (Cognitive science series, 2.) Cambridge, Mass.: Harvard University Press.

Jackendoff, Ray. 1983. *Semantics and cognition*. Cambridge, Mass.: MIT Press.

Kay, Paul, and Chad McDaniel. 1978. The linguistic significance of the meanings of basic color terms. *Language* 54.610–646.

Lakoff, George, and Mark Johnson. 1980. *Metaphors we live* by. Chicago: University of Chicago Press.

Lakoff, George, and Mark Johnson. 1999. Philosophy in the flesh: The embodied mind and its challenge to Western thought. New York: Basic Books.

Schank, Roger C., and Robert P. Abelson. 1977. Scripts, plans, goals, and understanding: An inquiry into human knowledge structures. Hillsdale, N.J.: Erlbaum.

Wierzbicka, Anna. 1985. *Lexicography and conceptual analysis*. Ann Arbor, Mich.: Karoma.

Wierzbicka, Anna. 1992. Semantics, culture, and cognition. Universal human concepts in culture-specific configurations. Oxford and New York: Oxford University Press.

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etrymology. As an aspect of linguistics, a scholarly activity, or a specimen of such activity, etymology is widely recognized, but it is not a proper field in itself. Taken most strictly as a relationship, an etymology is the history and prehistory of a locution; it is sometimes presented as a recitation of evidential sets containing the locution in question, which exemplify systematic correspondences through cognates that validate a genetic familial relation among languages. A modern etymology and its study presuppose an adequate grasp of the nature of phonological, morphological, syntactic, and semantic change; of analogy, borrowing, reconstruction, and internal reconstruction—in fact, an older acceptance of "etymology" centered on the synchronic derivational relation between words—and of areal linguistics.

Among introductions to etymology, the only modern work is Bammesberger 1984. For the early background of the topic, see Thurneysen 1905. More re-

cent discussions include the flawed but well-intended book of Ross 1958, the intelligent and informed work of Pisani 1967, and the richly annotated bibliographies of Malkiel 1976, 1989; see also Keller 1958, Schmitt 1977, Pfister 1980, and Seebold 1981. Malkiel 1994 never manages to reach its declared subject—the essential nature of etymology.

1. History of etymology. The attempt to find or explain the source(s) of a word, especially a name, is as ancient as anything we know in human documents. In the Rig Veda (5.2.12), the name of the fire god Agni (really < I[ndo-]E[uropean] *ng-ni) is derived from ajāti 'may he drive/capture (as spoil)' (really < IE $*H_ae\hat{g}$ -), as if j were here the palatalization of g. It was the duty of an ancient Irish court poet to know (or invent) and recite his lord's genealogy and the origin of local place-names whence history for them, and much early literature for us. Plato's Cratylus is seriously occupied with the (fantastic) derivation of names from ordinary predications; it contains truth in nuce, but vitiated by lack of principled constraints. The fallacy in such ancient attempts, and in untutored modern ones, lies in urging synchronic combinations of phonetic segments, arbitrarily chosen and perhaps discontinuous, with grammatically uncontrolled phrases and vague semantics (cf. Malkiel 1994). Particularly in the case of poorly attested languages, we frequently extract valuable grammatical knowledge from etymological study of names under principled modern theory (Hamp 1975).

The Greek term etumología 'account or derivation of the true' (for Cicero, verbum ex verbō vēriloquium) seems to have arisen with the Stoics. Varro termed it the part of grammar which explained "why and whence words are," and he characterizes it as disciplina verborum originis (Lingua Latina 6.1). So too, Quintilian (1.6.29) equates it with *orīginātiō*. In speaking of etymology and rhetoric, Cicero uses the term notātiō. Varro recognized that earlier intervocalic s had become r in Latin; but he did not apply this knowledge, doubtless not aided by the total loss of the same s in Greek. Failure to perceive regularity in phonetic development, and ethnocentric provinciality with foreign languages, persisted through the Renaissance: in 1554, Périon tried to derive French feu from Greek pûr. (Fr. feu, from La[tin] focus 'hearth', bears no relation at all to Gk. pur.) The fact that Varro could guess that medius 'mid' underlay La. merīdiēs 'midday' does not attest to a systematic method or penetrating theory. Isidore of Seville, an important theorizer in the transmission of this branch of study, in his *Origines* (also known as *Etymologiae*) seems to equate *etymologia* with *orīgō* and *(ad)notātiō*, and to base his linkage of *cognitiō* and *interpretātiō* on Quintilian's relation of *verba* 'words' to *rēs* 'things'.

The development of etymology in the West has in fact been neither linear nor cumulative. The Greeks failed to look seriously outside Greek; the Romans, in their adulation of Greek learning and models, neglected their neighboring Italic laboratory; and Romance scholars looked piously to Latin, with deviations taken simply as vagaries. Edward Lhuyd (Archaeologia Britannica, 1707) marked a distinct advance in theoretical principle, perceiving that the "comparative etymology" of languages was based on "their correspondence to one another," through "shewing by the collection of examples methodized, that etymology is not...a speculation merely groundless or conjectural." Perhaps his insight was fostered by his multilingual background in framing this statement of an embryonic Comparative Method [q.v.].

We might expect that the virtues or shortcomings of an etymology, in explicating the diachrony of a locution, would reflect the views of its epoch on the transmission and genesis of human languages. In 1853, the great Romance comparativist Friedrich Diez considered that the aim of the etymology of a word was the citation of an earlier or source word, i.e. in Latin (or in Latin borrowed from Greek, or in Arabic, or in more removed sources), yet no justification for the transmission was attempted. Thus street might be credited to La. strāta, i.e. via strāta 'paved way', but without mentioning the role of Roman road-building. With the coming of a true comparative method, Romance derivations from Latin could also point to whole source words, since Latin is known directly; but IE derivations produce pure reconstructions and have tended to recover simple roots, or bases. Furthermore, reconstructions of the Romance type have been offered for Polynesian, Chinese, Bantu, and Algonkian, because of their intrinsic structures, or their high morphological comparability; while IE-type reconstructions are found for Semitic, Uralic, Oto-Manguean, and the poorly understood Hokan family. Clearly we are here prisoners of our material as well as our Zeitgeist. In the early 19th century, Franz Bopp and August Friedrich Pott aimed to inventory the IE elements that could be recovered by segmentation into roots, affixes, etc.—a method obviously borrowed from Hindu grammar.

Antoine Meillet (d. 1936) claimed that it is not enough simply to show correspondences, i.e. to indicate roots; we must also strive to recover the structure and function of IE locutions. We must not just perform a dissection, but rather write a history. A good etymology, said Meillet, clarifies both form and use, and must be exhaustive. For over a century, the requirement of total accountability has been generally assumed for the sounds in an etymon; but all too often it has not been applied strictly to morphology and semantics. Thus, otherwise serious etymologies frequently neglect morphophonemic alternations (i.e. of vowels or "ablaut"), or semantic shifts which misleadingly appear to be slight. A correct etymology must account for every feature at every stage. Thus, if La. truncus 'tree trunk' is to be derived from *dru-n 'tree, wood' + -iko-s, a suffix of appurtenance, it is important to show evidence of its early use as an adjective. Ever since the era of Jules Gilliéron (1854–1926), the explanatory value of geographic dialect sources (e.g. Eng. vat, vixen, cuss) has been appreciated; but Meillet touched an under-appreciated aspect by insisting on the proto-dialectological area of comparanda for an etymon. At all stages, we must observe (or allow for) the social use, distribution, and stratification of a form; much of our early IE vocabulary is attested in poetic, probably "aristocratic" texts (cf. Watkins 1995), while nearly all we know of Dacian, the ancient language of Rumania, consists of plant names. Meillet called for the full use of all the tools of historical linguistics, while acknowledging that our account of loans in their social context, and of contaminations between contemporaneous alternatives, depends on the degree of our information. In the case of a language with an attested history, we must heed not only geographic and social variation, but also textual style and the role of foreigners in the society.

2. A formal definition. We may now attempt a more formal definition of a modern etymology, while keeping Meillet's stipulations in mind. For the past century, laymen as well as linguists/philologists have expected an etymology of a word (less usually of a phrase or clause) to respect, but not to explicate, its synchronic grammatical constitution, and primarily to trace its form and meaning back in time or forward from a stated point, as far as responsible scholarship can manage. Such 'tracing' should be expressed in explicit formulations for every discriminable chronological stage

in the known life of the expression. 'Form' refers to the nexus of phonological features with morphological elements and strings; 'meaning' refers to the association of morpheme groups with cultural or propositional or discursive semantic entities.

More technically, an etymology is an excerpt, over a selected bundle of morphonological and semantic features, from the known historical grammar(s) of a set of culturally connected language stages. To every extent possible, the dating of all stages and attested forms must be specified, either through relative chronology or through external evidence or documentation. As an excerpt, a good etymology will mention as many ancestor and related forms and stages as are relevant, and permitted by constraints of space and format. If the total reconstruction cannot be shown, sufficient forms should be supplied to outline and substantiate the argument.

- **3. Types of descent.** An etymology may trace various kinds of descent, such as inherited, i.e. totally internal to the language, or borrowed, i.e. external. Descent may also be mixed, with the following types of borrowed elements.
- (a) Base: duke-dom, be-muse (cf. to muse, amuse).
- (b) Affix: laugh-able, re-make.
- (c) Semantics: American Eng. *corn* 'maize' (usually not 'wheat, barley'), or Greek and Albanian 'oak' < IE phonological shape for 'beech'.
- (d) Syntax: Eng. That goes without saying (not being said) < French Ça va sans dire.
- (e) Morphology: Rumanian *douăzeci* 'twenty' (lit. 'two tens', with 'ten' in fem.pl.), instead of La. *vīgintī*.
- (f) Morphology and semantics: La. accentus 'accent' = $ad + cantus < Gk. pros + \bar{o}id ia$, as Quintilian tells us (i.e. 'toward-singing').
- (g) Syntax and semantics: Eng. 'expanded' *I am drinking* < Welsh (or late British) yð wyf yn yfed.
- (h) Morphophonemics, as where the idiosyncratic syllabic syncope in Mandrítsa Albanian numerals precisely matches those of the surrounding Bulgarian.

A special subvariety might be called "syntactophonemic"; for example, in pre-IE thematic substantives, the phrase-final nom. pl. ending *-es* was added, but elsewhere a word-final thematic vowel simply affixed *-*i*.

Etymology may also have to take account of foreign phonology, as with the clicks of Nguni Bantu (from Bushman and Hottentot), the front rounded vowels of (now extinct) Greek dialects in central Turkey, French nasal vowels in German borrowings (*Champignon* 'mushroom'), or the [x] of *Bach* in careful English speech —or of foreign phonetics, as in affective particles used in endogamous Albanian enclaves in Calabria.

- **4. Inherited descent** may involve the following patterns, many of which demonstrate exact regularities of change:
- (a) A single morpheme: La. -que = Gk. te = Old Irish -ch 'and' $< IE *-k^we$.
- (b) A possible complex: Italian e(d) < La. et < IE *eti 'beyond', with mild change in sense; or Slavic i 'and' < *(j)i < IE *i (locative with zero ending) '(t)here(on), at it', with greater semantic change.
- (c) A clear original complex: Armenian *ew* 'and' < '(there)upon' = Gk. *epi* 'upon' < IE *?*epi*; or Eng. *and* = La. *ante* 'before' = Gk. *anti* 'opposite' (Hittite *hant* 'front' < IE *?*ent*-*i* loc. 'in front'); or Eng. possessive 's < Old Eng. gen.sg. -*es* < Germanic -*esa* (~ -*asa*) ← *-*asa* < IE thematic *-*o* + gen. *-(*o*)s + empty NP enclitic *-*o*.
- (d) A lineal complex: Old Lithuanian *esti* 'is' < IE **?es-t-i 'be-3sG.-now'; Gk. patér-es 'father-s' (nom.) < IE **pHatér-es; or Gk. árotron 'plow' < IE **her?"-tr-o-m 'plow-INSTR-INAN-NEUT'.
- (e) A paradigm of complexes, such as the declined forms of the Sanskrit nouns svásar- 'sister' *sue-sor- ('-female') and tráyas masc., tisrás fem. *t(r)i-sr-és 'three'; or the conjugated forms of the Greek verb dídōmi 'give', when we trace these paradigms back to IE.
- (f) A compound: Eng. hussy < hussy < hussyf-< Old Eng. * $h\bar{u}s + w\bar{t}f$ 'house-wife'.
- (g) A phrase: Eng. daisy < Old Eng. dæges ēage 'day's eye'.
- (h) A clause or sentence: La. volup est 'it's pleasant, okay' < IE *uél-óp-?esti (with enclitic copula) 'it is desire-reaching'.
- (i) A suppletive paradigm: Albanian *jam* 'I am' < IE *? *es-m-i*, but past tense *kle*, *qe* < **kloî-e* '(somebody) leaned, rested > was' (employing different roots).
- (j) A defective or skewed paradigm: Albanian *jep*, OIr. *do·beir* 'gives', but Alb. *dha*, OIr. *do·r-a-d* (< **to* +*pro-ad-d*Υ^w-) 'gave', matching Gk. *é-do-men* (< **d*Υ^w-*me*) 'we gave' which also in IE was aoristic and formed a derived present. Gothic *iup* : *uf* (Hamp 1992).
- (k) A structured system of lexical terms interlocking

with other aspects of culture or social structure, such as the IE or Algonkian kin terms for the nuclear family and avuncular relations.

Most inherited descents are not so lineal as those just illustrated, and require appeal to near-cognates and to formational and syntactic rules and shifts. Thus Germanic *fiskaz 'fish' and Albanian peshk < *piksko- is an ostem; La. piscis < *pikski- is an i-stem; Old Irish iasc < *peiksk-o- is a thematic derivative; and the rivers called Esk in Britain are perhaps adjectives of appurtenance. Syntactic reassignment results in such descents as all ready > already, analogous to the lexical split of shade and shadow, founded on inflectional misassignment. Shifts over time in morphology can be seen in Eng. above < Old Eng. abufan, a petrified phrase with on-; the balance matches Dutch boven with b(e)- (Eng. by), and then German oben, Old Frisian uva, an archaic stem alternant in -n- corresponding to over = Skt. upári, Gk. hupér 'above, over'. Non-lineal inherited descents of this kind are closely akin to the type of internal descent involving what is termed "Analogy," and there is no sharp line between the varieties. A descent involving paradigms or inflections which come to function in alternations—or become stranded and are left to atrophy, as when (for)lorn is displaced by lost—may yield opaque chains which resist or alter segmentation: grist/grind, rust/red, seam/sew, tithe/ten, water/wash, yolk/yellow. They may invite a new independent descent: La. com $esse \rightarrow com\text{-}edere > Spanish com\text{-}e\text{-}r 'eat' \rightarrow com\text{-}i\text{-}d\text{-}$ a 'meal'). Portions of formations get replaced by synonyms: IE *suH-n-u-s (*suH- 'bear, give birth') > Lithuanian $s\bar{u}n\dot{u}s$, Eng. son; but it is replaced by *b(h)eru-s (with IE *bher- 'give birth') in Albanian i bir 'son'. Thus the replacement of a suppletive paradigm is merely an elaborate root analogy: IE pres. *ei-, aor. *gwem-/ $g^w e H_a$ - 'go' (> Eng. come, which has lost its preverb * ∂ 'toward', which with 'go' = 'come') was leveled in Latin to eō, īre, iī, itum; but it was redistributed to Old Eng. $g\bar{a}n$, past $\bar{e}ode$ (> later dialect forms yVd(e)) > Eng. go, went. Thus, the Albanian spread of *bher was as if *suH was its suppletion instead of IE *?nek- as in Greek and Balto-Slavic.

The descent of collocations leads to seemingly abrupt replacements: La. *iecur* 'liver' was replaced in Romance by the adjective *ficātum*, referring to the gourmet liver in animals fattened with *fīcī* 'figs'. The Germanic tribes had no figs, but knew that the result was 'fatty' (cf. Gk. *liparós*), hence Eng. *liver*, Ger. *Leber*. La. *cauda* 'tail'

may be the stranded participle modifier *cau-ed-a from $cave\bar{o}$ 'ward off', with the deletion of the noun for the object that wards off flies in a farm setting.

- 5. Borrowing. The step from such replacements to outright borrowing is nearly imperceptible; in fact, borrowings enter the language much as the above inherited alternants move about. Thus Albanian has vjen 'comes' < La. venit, and so on throughout the presential system; but the past is erdh-, non-finite ardhur, both inherited. The Albanian quasi-imperative '(let's)go!, come!' is hajde, from Turkish. La. altus 'high' was contaminated by a Germanic (Frankish) counterpart in h- to give French haut 'high'. Borrowings can intrude intimately: Rumanian leurdă 'garlic' results from misdivision of *(ista) (a)lli(u)-hurda(-illa), a blend of La. ālium, allium and the autochthonous word seen in Albanian hudhrë. On George Eastman's testimony, Kodak favored k because that was the initial of his mother's name. Nothing comes from nothing. Phonesthemes, as in flip, flop/flap, seem to develop from internal convergence, then to become fresh sources of derivation.
- 6. Associated processes. Borrowings and inherited material alike betray cultural correlates (as in 'Wörter und Sachen' research): Eng. spoon (Ger. Span 'chip', Gk. sphenn 'wedge') points to ancient wooden chips; Eng. sooth, the participle to is, attests a conceptual equivalence of truth and reality. The gender of Algonkian 'stone' which we call "animate" tallies with modern Crees' attribution of internal "power" to stones. With sufficient ethnographic reconstruction, we can understand potential conundrums: later Welsh go-ganu (< 'sing in aid', from canu 'to sing') can mean both 'revile' and 'praise' because an early bard's duty was to praise his lord and satirize the court's enemies. Greek bdállō 'I milk' becomes clear (bdal - < *pod 'foot' + -l- 'belonging') when we recall from Celtic that 'morning' is identified as 'cowtying' (Hamp 1998). Borrowings, like the names of most cultigens, can label new concepts (sputnik, boutique), but not always. Conjunctions, e.g. pero 'but' from Spanish in most Mayan languages, get borrowed by bilinguals at points of discourse shift.

Accidental merger leads to homonyms (Eng. let 'hinder', 'allow')—and to the conflation known as 'étymologie croisée', when two source formations with similar semantics become blended. A semantic component can be extracted and copied into a separate morpheme, yielding hypercharacterization. A bleached or empty morpheme may be exploited to disambiguate: Italian frate > 'monk' $\rightarrow fratello$ 'brother'; Old Irish arcu 'I ask' \rightarrow