Research in the supporting sciences

Linguistic theory

87–492 Dwyer, David (Michigan State U.). What are chimpanzees telling us about language? *Lingua* (Amsterdam), **69** (1986), 219–44.

The divergent views expressed in the literature on the linguistic competence of chimpanzees is due in large part to the lack of a common framework in which to compare human and chimpanzee signing. Working for the most part within a Saussurian semiological framework, several distinct 'tactic' sign types, including: ataxis, lexical parataxis and syntax, are introduced for the purpose of comparison. These types are then illustrated through the ontological development of human signing be-haviour. Next, the data on the signing behaviour of chimpanzees, both wild and captive, are analysed with the conclusion that, while chimpanzees do show evidence of true semiological communication, their tactic ability does not appear to exceed that of lexical parataxis. This conclusion draws attention to the significance of the difference between syntax and lexical parataxis which in turn tells us something more about the nature of human language.

87–493 Edmondson, William H. (Birmingham U.). Issues in linearisation: prolegomena for a general theory of communication. *Language and Communication* (Oxford), **6**, 4 (1986), 225–66.

This article deals with the concept of linearisation – the human process of placing conceptual or linguistic entities in sequence – with particular reference to oral language communication. The concept is, however, simplistic, since although we structure our thinking in order to communicate effectively, we also de-structure information when we are engaged in reception or perception processes.

Sign language provides an illustration of the inadequacy of the notion of linearisation when it is applied to communication. Various aspects of a concept or action can be expressed virtually simultaneously in sign language, e.g. that a box is heavy. If this is translated into grammatical terms, it may be said that subject, verb and adjective are communicated simultaneously. It is clear that sign language requires sequencing, but probably less extensively than oral language.

Analysis of a range of conventional grammar theories which, preoccupied with linear order, are unnecessarily restrictive, reveals that they do not reflect the fact that sequential structure may be merely the result of the ordering of muscle movements, essential for speech production.

Although there is a tendency for current grammar theories to include pragmatic factors, there is a need for greater recognition of the structuring and de-structuring processes involved in communication. A theory of grammar must be developed which is not subject to the constraints of implicit or explicit sequentiality.

Phonetics and phonology

87–494 Chan, Marjorie K. M. On the status of 'basic' tones. *UCLA Working Papers in Phonetics* (Los Angeles), **63** (1986), 71–94.

This paper questions the traditional concept in Chinese dialectology of *ben diao*, 'basic tones', which takes the 'basic' tones to be coterminous with the citation tones, and proposes that the concept be revised based on the existence of an increase in tonal contrasts that arise in tone sandhi context in a number of Chinese dialects. The paper concludes with two examples from the Fuzhou dialect to demonstrate that tone sandhi positions may also preserve segmental contrasts that are totally or partially neutralised in citation context.

87–495 Takefuta, Yukio (Chiba U., Japan) **and others.** Cross-lingual measurements of interconsonantal differences. *Journal of Psycholinguistic Research* (New York), **15**, 6 (1986), 489–507.

Native speakers recorded pairs of consonant-vowel (CV) and vowel (V) syllables in Japanese, American English, Serbo-Croatian, and Italian. All initial consonants of each language were paired with each other. For example, a speaker would read *a-a, a-pa, a-ma*, etc., through all of the consonants. The next series would commence *pi-i, pi-pi, pi-bi, pi-mi*, etc., through the consonants. Five vowels were used. Following typical instructions of the method of magnitude estimation, native panels of 20 to 26 listeners, all university students, individually assessed the sameness or difference of a pair of syllables. The measures were normalised and averaged for each series of pairs of syllables.

Sixteen of the prevocalic sounds, including the absence of a consonant, were deemed phonetically similar from language to language. First, inter-correlations were computed among the languages with respect to the 16 judgements made of the differences between each consonant and the consonants of that language, itself included. Second, a factor analysis was made of each matrix of interconsonantal distances. Third, a cluster analysis was made of the 64 (= 16 × 4) sounds of the four languages.

Sociolinguistics

87–496 Alladina, Safder (U. of London Inst. of Edn). Black people's languages in Britain – a historical and contemporary perspective. *Journal of Multilingual and Multicultural Development* (Clevedon, Avon), **7**, 5 (1986), 349–59.

The history of the presence of black people in Britain is being salvaged. It is now known that the presence of black people in Britain dates back centuries. This paper traces the history of the presence of black people's languages in Britain and also gives a contemporary perspective. In academic establishments the study of black people's languages dates from the middle of the 17th century and reached its heyday towards the end of the 19th and the beginning of the 20th centuries. It is at this time that examination standards for and departments of these languages were set up in establishments of learning in Britain. However, the academic study of these languages and their use in the homes and streets of Britain were distinct and separate. It was after World War II that larger groups of speech communities of black people appeared in Britain. Initially, the British education system disregarded the presence of these languages. In the teaching of

English in schools, the Afro-Caribbean and Asian children were separated from one another. Academic development of both these groups suffered. In the last two decades, more than £1.5 million has been spent on the study of the languages of black people in Britain but it has been of little benefit to the speakers of these languages, and the picture today remains muddled and unclear. The weaknesses in pedagogic strategies, teaching materials and language use information still persist. Many reports have been written on the language and academic performance of Black British school children but consideration given to the implications of major studies from around the world has been perfunctory. The need now is for black people in Britain to define and articulate their own language needs, to contribute towards the theory and development of language teaching, teacher training and production of teaching material.

87–497 Butzkamm, Wolfgang. Geist und Sprache – mit einer Anmerkung über sprachlichen Sexismus. [Mind and language – with a comment on linguistic sexism.] *Zielsprache Deutsch* (Munich, FRG), **17**, 4 (1986), 4–11.

Although language and thought have reciprocal effects, the latter has primacy and cannot, as is sometimes claimed, be totally dependent on the former. Our perceptions of such basic categories as time and space are biologically determined and reflect evolutionary processes which pre-date lan-

guage, and even the often quoted differences between the human languages, e.g. in colour terms, are only possible within limits set by these species-specific constraints.

Similar considerations apply to sexism: although our language may indeed be biased towards a male

norm, this is a result of history, and need not cause sexist thought or behaviour: or language can perfectly well be used to argue for the equality or even the superiority of women. Forms which are felt to be discriminatory (e.g. *Fräulein* to a waitress) may quite properly be changed, but we need not agonise over such things as the generic use of masculine morphemes, of which non-linguists are normally unconscious.

87–498 Crawford, Mary (West Chester U., Pa) **and Chaffin, Roger** (Trenton State Coll.). Effects of gender and topic on speech style. *Journal of Psycholinguistic Research* (New York), **16**, 1 (1987), 83–9.

Male and female subjects described nine photographs that had been selected to be of interest to males, females, or both. The resulting speech samples were analysed for the incidence of five features of word production and five features associated with a 'women's language' (WL) speech style. Results showed that topic (photograph type) determined aspects of speech production. However, there were no gender differences in production or style. Correlations between dependent variables suggested that WL is a consistent set of features. Its use by both female and male speakers may reflect social uncertainty.
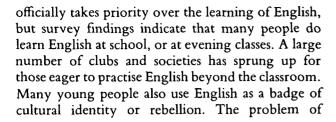
87–499 Dorian, Nancy C. (Bryn Mawr Coll., Pa). Making do with less: some surprises along the language death proficiency continuum. *Applied Psycholinguistics* (Cambridge), **7**, 3 (1986), 257–76.

Relative proficiency in Gaelic varies by age in a Highland Scottish region where Gaelic is spoken by a decreasing number of bilinguals in a steadily aging population segment. Although there is a Gaelic proficiency continuum ranging from full fluency (and Gaelic dominance) to minimal generative skills (and English dominance), there are also deviations at both extremes of skill: fully fluent speakers show self-conscious difficulty with one morphological and four syntactic structures, while minimally proficient speakers show less difficulty than might be expected in the use of conjunctions. An exceptionally keen though low-proficiency speaker can devise unusual means of compensation in using the language. Neither full fluency nor marked deficiency produces altogether predictable levels of structural conservatism or communicative success.

87–500 Dürmüller, Urs (U. of Berne). The status of English in multilingual Switzerland. *Bulletin CILA* (Neuchâtel), **44** (1986), 7–38.

The multilingual status of Switzerland has not been weakened fundamentally in the past hundred years, but multilingual stability is not dependent only on internally controllable factors. One threat posed to the native Swiss languages is the spread of English. The expansion of English in Switzerland can be attributed largely to three factors: linguistic diversity, material incentives and 'cultural affiliation'. Linguistic diversity has resulted in a perceived need for a single language of official communication within Switzerland. The federal and cantonal authorities have made increasing use of English, although Swiss language policy has traditionally aimed to establish language repertoires for native speakers that consist of (a) their native language, (b) one of the other Swiss national languages and (c) English or another Swiss language. Recent surveys of high-school students and military recruits, however, indicate a widespread wish to learn English as their second language. In other quarters there are fears that increasing use of English could threaten the cultural heritage of Switzerland by tending to weaken the understanding of the various population groups for one another's culture, and current language policy is designed to maintain the use of Swiss national languages for internal communication. There are significant material incentives for the Swiss to learn English. Many postgraduate students spend time in English-speaking countries, encouraging the emergence on their return to Switzerland of specific profession- and activity-related varieties of English. High-school students questioned about their motivation for learning English pointed to its status as an international language, and the language of business, tourism, and science. They believed knowledge of English enhanced their job prospects. The phenomenon of 'cultural affiliation' is also central to the spread of English in Switzerland. The Swiss have readily embraced modern American culture in the twentieth century, and exposure to English through books, films and pop music is constantly increasing. In Swiss schools, learning of the national languages

officially takes priority over the learning of English, but survey findings indicate that many people do learn English at school, or at evening classes. A large number of clubs and societies has sprung up for those eager to practise English beyond the classroom. Many young people also use English as a badge of cultural identity or rebellion. The problem of whether to teach American or British English in Switzerland remains unresolved. British English has traditionally been preferred, but there is increasing recognition of the impossibility of halting the flood of Americanisms finding their way in by the back door.

87-501 Gupta, Anthea Fraser. A standard for written Singapore English? *English World-Wide* (Heidelberg, FRG), **7**, 1 (1986), 75–99.

An examination of aspects of the vocabulary, syntax and punctuation of Standard Singapore English which takes into account three criteria which need to be considered in any attempt to establish a standard for written Englishes, viz. considering only (1) local prestige usage (written, not informal), (2) usage not locally stigmatised and (3) usage not internationally stigmatised. Standard Singapore English would differ little from general Standard English and by and large its features would exploit possibilities within standard which, while not being enshrined as standard, are nevertheless to be found in the spoken English – at times in the written English – of users of the sort who are thought of as standard users. Although general Standard English of a normative kind is to be found in most textbooks used in Singapore schools, the endonormative standard as described in this article is already being taught in Singapore schools through the non-guided spontaneous usage of schoolteachers. It is probably not possible to legislate a standard. Even if it were possible actively to promulgate an endo-normative standard, it remains unclear whether it would be desirable.

87-502 Hijirida, Kyoko and Sohn, Ho-min (U. of Hawaii). Cross-cultural patterns of honorifics and sociolinguistic sensitivity to honorific variables: evidence from English, Japanese, and Korean. *Papers in Linguistics* (Champaign, Ill), **19**, 3 (1986), 365–401.

In this paper are presented both paradigmatic and syntagmatic patterns of honorifics that compare American English, Japanese, and Korean. A set of cross-cultural variables of power and solidarity is proposed and discussed in relation to the usages of honorific expressions. Of the three languages in comparison, American English is the least sensitive to all the power variables and group solidarity, to which Japanese and Korean are highly susceptible. In their sociolinguistic behaviour, Americans appear to render the greatest relative importance to the intimacy variable, Japanese to groupness, and Koreans to age.

87-503 Khettry, Françoise. Assimilation linguistique et attitudes linguistiques de jeunes Alsaciens. [Linguistic assimilation and linguistic attitudes of young Alsatians.] *Canadian Modern Language Review* (Toronto), **43**, 1 (1986), 59–78.

This study examines the influence of linguistic attitudes of young Alsatians both on their 'concrete' assimilation (as evidenced by their linguistic behaviour at school) and on their 'ideological' assimilation (their linguistic norm and their attitude towards maintenance of the dialect). The results confirm the influence of linguistic attitudes on the linguistic assimilation of the subjects. They also show that 'concrete' assimilation does not neces-sarily entail 'ideological' assimilation and vice versa. These results are positive because they suggest that the Alsatian dialect is not necessarily doomed to extinction, and that maintenance of minority languages can be helped by teaching the younger generation of linguistic minorities how to value the language of their group and by combatting stereotyped opinions about language.

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87-504 Krishnamurthi, Bh. (Osmania U. and U. of Hyderabad). A fresh look at language in school education in India. *International Journal of the Sociology of Language* (Amsterdam), **62** (1986), 105–18.

India has 221 languages spoken by 10000 or more speakers. Of these, only 14 modern Indian languages are recognised by the Constitution. This article discusses the contradictions and anomalies in both 'status planning' and 'corpus planning'. A plea is made to implement the Constitutional guarantee to impart primary education through the mother tongue to linguistic minorities and speakers of minor languages. Suggestions are made to streamline and reform the roles of different languages in education. An action plan is suggested to implement the proposed reforms. The pattern to emerge should include teaching through mother tongue, at least up to the primary school level, for the entire population; the use of the major regional language at all levels of education and administration at the intrastate level; the use of Hindi, the Official Language of India, for interstate social contacts, correspondence, and trade; and finally the use of English, the Associate Official Language of India, for intellectual communication at the highest level of study and research and as an instrument of modernisation.

87-505 Mulac, Anthony and Lundell, Torborg Louisa (U. of California, Santa Barbara). Linguistic contributors to the gender-linked language effect. *Journal of Language and Social Psychology* (Clevedon, Avon), **5**, 2 (1986), 81–101.

Forty speakers (20 male, 20 female), ranging from 11 to 69 years of age, described landscape photographs orally to a researcher. Orthographic transcripts were analysed for 31 linguistic variables. A discriminant analysis showed that a combination of 17 variables predicted speaker gender with 87.5% accuracy. The 17 gender-discriminating language variables were used in multiple regression analyses to predict previously found speaker attribution ratings for these speakers. Results showed significant predictive ability for all three attributional dimensions: Socio-Intellectual Status ($R^2 = 0.53$), Aesthetic Quality ($R^2 = 0.43$), and Dynamism ($R^2 =$ 0.33). Of the 14 language variables displaying effects consistent with the Gender-Linked Language Effect, seven were more indicative of male speakers: impersonals, fillers, elliptical sentences, units, justifiers, geographical references, and spatial references. Greater use of the other seven variables was more indicative of female speakers: intensive adverbs, personal pronouns, negations, verbs of cognition, dependent clauses with subordinating conjunctions understood, oppositions, and pauses. These clusters of male and female contributors to the effect are discussed in terms of potential underlying communication strategies.

87-506 Panton, K. J. (City of London Poly.). Patterns of reading ability in the inner city: a study of London. *First Language* (Chalfont St. Giles, Bucks), **63** (1985/6), 203–18.

Sociolinguistic studies of language development have tended to concentrate on the home and the classroom and to emphasise the importance of social class as a major determinant of differences in language style. However, analyses of spatial patterns of reading attainment in inner London indicate that although class is important its influence is moulded by features of the neighbourhood in which the children live. These neighbourhood influences may help explain areal variations in the performance of members of the same social class living in different parts of the city. It is suggested, as a result of these findings, that a focus on the local area by students of linguistic development may provide additional information about processes of language acquisition.

87-507 Rampton, Ben (U. of London Inst. of Ed.). A methodology for describing socio-linguistic variability within multi-lingual settings in general, and 'interactive' and 'reactive' ethnic processes in language in particular. *York Papers in Linguistics* (York), **12** (1986), 135–52.

After mentioning the social context where the author is conducting his research (and where the ideas outlined below have yet to be put to the test), this paper briefly refers to work on the English of

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British schoolchildren of South Asian extraction. It then speculates on the relationship between their English and two ethnic processes – what Gumperz calls the 'interactive' and the 'reactive'. The way in which Network Analysis (as used by Gal and L. Milroy) permits an investigation of the first of these is outlined, and then consideration is given to a means of examining the second (the 'reactive'). This is Identity Structure Analysis (ISA), developed by Weinreich, which in addition provides a systematic method for discovering what it feels like inside a network. The paper ends with a bolder claim for this combination of Network Analysis with ISA. Together, they give empirical and economical realisation to several important components in Le Page's sociolinguistic hypothesis and riders. Depending on the adequacy and status of this theory, the methodology described here covers parameters that are really the most fundamental to any (neighbourhood) sociolinguistic survey (whose main focus is on the language of the individual speaker).

87–508 Shuy, Roger W. Ethical issues in analysing FBI surreptitious tapes. *International Journal of the Sociology of Education* (Amsterdam), **62** (1986), 119–28.

Ethical principles for research involving human subjects have been enumerated by the American Psychological Association (APA): they cover risks to subjects, treatment of subjects, exploitation of the research relationship, securing agreement of subjects, concealment, deception, coercion, misconception, anonymity, and confidentiality. The Linguistic Society of America could not accept covertly-recorded language data, however desirable as a representation of real language use, yet when participants know that they are being taperecorded they talk in a different way. Different ethical problems arise when data are gathered under legal conditions which override the ethical guidelines of academic fields, such as the use of confidential informants, authorised electronic surveillance, undercover agents, etc. These covert recordings are then used as evidence in court. They are of particular interest to researchers because their acquisition bypasses the usual safeguards. In this case, the ethical issues centre only on analysis and publication. The FBI has its own guidelines, which are compared with those of the APA, but there is considerable doubt whether the FBI ensures the ethical conduct of its co-workers.

Regardless of the ethical problems concerning the gathering of such data, linguists are often asked to analyse the data for use in court and it is not unethical for them to do so, to instruct the jury about the structure of the recorded conversations. If such analysis is then published as academic work, names and places can be fictionalised to preserve anonymity.

87–509 Westphal, Germán F. On the teaching of culture in the FL curriculum. *Canadian Modern Language Review* (Toronto), **43**, 1 (1986), 87–93.

This paper claims that no matter what the teaching approach is, the socio-cultural aspects of language and language use are always present in the FL curriculum, examines the validity of this claim in the light of some examples drawn from Spanish, and concludes that to the extent that the role of the profession is to teach 'standard language.' i.e. the dialect of the dominant social class in the relevant linguistic communities, FL teachers are unavoidably teaching the socio-cultural views and values of that class. In order to supplement these views and values with those of the non-dominant social classes, the ethnic minorities, and the 'socially and culturally' deprived, it is suggested that dialectal variation should be introduced from the very early stages of the FL teaching–learning process. Without this component – it is argued – no FL programme can make a claim to linguistic authenticity. Finally, the educational advantages of the innovation suggested are briefly discussed.

Psycholinguistics

87–510 Bigelow, Ann (St Francis Xavier U., Nova Scotia, Canada). Early words of blind children. *Journal of Child Language* (Cambridge), **14**, 1 (1987), 47–56.

The first 50 words of three blind children were collected and analysed using procedures used by Nelson (1973) on 18 sighted children. The early vocabulary of the blind children paralleled that of

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the sighted children in the age and speed of acquisition, and in the underlying characteristics of what the children chose to label. These reflect a sensorimotor organisation in which self-action and perceptual change are the salient variables. The early words of the blind children differed from those of sighted children in the percentage of words in each of Nelson's grammatical categories. This suggests differences in how the children use language. These differences are discussed as a function of the children's lack of vision and their particular language learning context.

It is concluded that the similarities between the early words of blind and sighted children are related to language factors which are highly influenced by maturation. Specifically they are the age and speed of vocabulary growth and the underlying characteristics of what the children chose to label, which reflect a sensorimotor organisation. These factors point to the common processes which are at work in early language acquisition in populations who are quite diverse in their perceptual awareness. The differences between the early language of blind and sighted children are related to factors which are highly influenced by experience. These differences are a result both of blind children's lack of visual experience and of the speech which is directed to them. Such differences may affect cognitive and social factors upon which language is based.

87–511 Chipman, Harold H. (U. of Munich). The development of sentence comprehension as a creative process. *Child Language Teaching and Therapy* (London), **2**, 2 (1986), 170–9.

Recent research has shown that young children's understanding of language is a complex process in which a high degree of linguistic creativity is evidenced at a very early age. An examination of early child language (roughly from one to three years of age) shows that at this stage children understand rather more than they produce. But between the ages of three and four children enter a phase of extensive language production, in both variety and quantity, in which they produce tokens of almost every type of possible sentence construction, even if such sentences are not fully understood until a much later age, i.e. production goes well beyond comprehension. The remedial question is how to enhance and stimulte the development of comprehension abilities.

Research on the comprehension process shows that children invent the role conservation strategy as a means of understanding particular sentence constructions; they use it only when a sentence contains a pronominalised agent or patient, and there are no other cues to achieve comprehension (e.g. *The boy pushes the girl and then he washes the other girl* is correctly understood but *The boy pushes the girl and then she washes the other girl* is not – children keep the same agent for both actions, thus conserving the agent role for the two actions). Children apply this strategy systematically between the ages of three and nine years. After that age, comprehension is brought about by an active search for the pronoun's meaning or referent. Research on sentential complement sentences (e.g. *The bear promises the fox to jump over the fence*) shows that children reformulate the task sentence to a type which they prefer, and even at age four, these reformulations are quite sophisticated ('The bear permits the fox to jump over the fence').

The consequences of such research findings for language teaching and therapy are that children learning language are not empty of know-how nor are they passive recipients of language features. They develop certain preferred modes or strategies for comprehension. Thus evaluating comprehension as correct/incorrect by means of external criteria is inadequate and superficial: the assessor needs to know what strategies or sentence patterns children have constructed in their heads. The child's unseen linguistic abilities should never be underestimated, nor should what he/she apparently understands.

87–512 Emmorey, Karen. Morphemic structure in the mental lexicon. *UCLA Working Papers in Phonetics* (Los Angeles, CA), **63** (1986), 110–24.

This article addresses the following: (1) do bimorphemic words require more processing time than monomorphemic words? (2) Are learners misled by pseudoaffixed words (e.g. *invite*), with a resulting delay in reaction time? (3) Do inflected/derived or prefixed/suffixed forms differ in recognition response times? A tape experiment using 144 words and non-words and a reaction timer is described (tabular data/graphs). The findings, based on a sample of 20 participants, indicated that reaction time seemed to be significantly related to word length; there were no apparent differences in the reaction times between prefixed and suffixed or bimorphemic/monomorphemic words. Pseudoaffixed words were not recognised more slowly than monomorphemic words.

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The results, which made use of Unique Point Analysis, were seen to contradict the Affix Stripping model (Taft), whereby any string resembling a prefix is removed prior to lexical access. The authors suggest, moreover, that suffix recognition is separate from word-stem processing, stems and suffixes probably being stored as distinct components in the mental lexicon. A model of auditory word recognition is advanced, which suggests that morphological structure is parsed on-line.

87-513 Feagans, Lynne (Pennsylvania State U.) **and Miyamoto, John M.** (U. of Washington). Non-word speech in discourse: a strategy for language development. *First Language* (Chalfont St Giles, Bucks), **6**, 3 (1985/6), 187–201.

This paper is an attempt to use the language development strategy of one child from 15 to 25 months to illustrate the importance of the non-word aspects of communicative development on the development of later language. The child studied here did not show an increase in MLU (mean length of utterance) from 15 to 22 months but within a three-month period after 22 months jumped from 1.2 to 2.0 MLU. This spurt is explained in terms of the other aspects of communication the child was acquiring over the time frame, including social games, intonation, and syntax markers. The strategy of this child was described as a social interactive one which focused on the structural features of the dialogue, rather than on words.

87-514 Fonagy, Ivan (CNRS, Paris). He is only joking. (Joke, metaphor and language development.) *Contrastes* (Paris), A5 (1985), 9–25 (special issue).

A funny remark can be regarded as a verbal act immediately followed by its invalidation: 'I didn't mean it, I am only joking'. The joker artificially creates a conflict between the deictic field and the verbal field. Economy of mental expenditure plays a crucial role in the technique of jokes and jokes can be classified according to the way in which the saving is achieved. Two fundamental principles are involved: (*a*) condensation of two different contrasting messages and (*b*) prevalence of more primitive, less demanding manners of processing experiences. Double meaning is achieved in a number of different ways [examples].

Children have no metalinguistic competence of metaphor – their answers to metaphoric questions are likely to be based on confusion in a first period, followed by a gradually increasing distinction between the assignment of proper (direct) and improper (indirect) qualities.

87-515 Golinkoff, Roberta Michnick and others (U. of Delaware). The eyes have it: lexical and syntactic comprehension in a new paradigm. *Journal of Child Language* (Cambridge), **14**, 1 (1987), 23–45.

A new method to assess language comprehension in infants and young children is introduced in three experiments which test separately for the comprehension of nouns, verbs, and word order. This method requires a minimum of motor movement, no speech production, and relies on the differential visual fixation of two simultaneously presented video events accompanied by a single linguistic stimulus. The linguistic stimulus matches only one of the video events. In all three experiments patterns of visual fixation favour the screen which matches the linguistic stimulus. This new method may provide insight into the child's emerging linguistic capabilities and help resolve longstanding controversies concerning language production versus language comprehension.

87-516 Labelle, Marie (U. of Ottawa). Le langage et les autres capacités cognitives. [Language and the other cognitive abilities.] *Cahiers Linguistiques d'Ottawa* (Ottawa), **15** (1986), 1–57.

Generalised sequences for children from 0–3 years in respect of language acquisition and cognitive development are compared [tables]. Remarkable parallelism as well as equal speed is noted. A general acquisition cycle is proposed in which the child (1) observes a relationship between a and b, (2) studies the relationship by repeating the action that gives rise to it, (3) extends the relationship to the whole class B while keeping a constant, (4) varies a, thus abstracting the relationship from its context, which

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then leads to its systematic and productive use. This model is linked to Fischer's model of cognitive development in which a similar cycle is applied at three periods (sensorimotor, representational and abstract) to produce abilities that are integrated in various skills.

87-517 Mack, Molly (U. of Illinois). A study of semantic and syntactic processing in monolinguals and fluent early bilinguals. *Journals of Psycholinguistic Research* (New York), **15**, 6 (1986), 463–88.

The present study consists of two reaction-time experiments administered in English. These experiments were designed to compare semantic and syntactic processing in English monolinguals and fluent early French–English bilinguals. Results of both experiments revealed that the bilinguals did not function as the English monolinguals did. That is, their reaction times were slower and they made twice as many errors in response to certain sentences. These findings are especially important for two reasons: (1) the bilinguals were all highly fluent, and in most cases dominant, in English, and (2) the bilinguals exhibited systematic differences in two different linguistic components (the semantic and the syntactic). The results are viewed as evidence of the interdependence of the bilinguals' languages. Some note is made of individual patterns of response, and two interpretations of linguistic interdependence are provided.

87-518 Mueller, Rachel A. G. and Gibbs, Raymond W. Jr (U. of California, Santa Cruz). Processing idioms with multiple meanings. *Journal of Psycholinguistic Research* (New York) **16**, 1 (1987), 63–81.

Three experiments are presented that examine understanding of idioms with one or more meaning. The results of Experiment 1 showed that subjects took longer to read and make paraphrase judgements for idioms when both their idiomatic and literal meanings are intended than it did to comprehend idioms meant only literally or idiomatically. In Experiments 2 and 3, subjects were faster at making phrase classification judgements for idioms with several different nonliteral interpretations than they were to make the same judgements for idioms with only one idiomatic interpretation. These findings suggest that idioms with more entries in the mental lexicon are accessed faster because it is more likely that one of their meanings will be encountered in a short time. The data overall support the idea that idioms are represented differently depending on their number of associated meanings.

87-519 Murray, David J. (Queen's U. at Kingston, Ontario). Characteristics of words determining how easily they will be translated into a second language. *Applied Psycholinguistics* (Cambridge),**7**, 4 (1986), 353–72.

This study was designed to test the hypothesis that variables such as word frequency, which are known to affect semantic memory, would have more influence on how quickly words were translated from English to French, or vice versa, than would variables such as imagery, which are known to affect episodic memory.

Students whose second language was French were presented with 145 words, with instructions that they translate them into French. Measures of accuracy and reaction time were taken. French–English translation of the same words was also investigated. Seventeen other characteristics of these words were also known from previous surveys. The results of a multiple regression analysis and a factor analysis indicated that translation efficiency was most strongly influenced by the frequency of the word in the language, its familiarity, and the similarity of the French equivalent to the English word. Variables such as emotionality and imagery, known to influence retrieval in episodic memory paradigms, had little influence on translation time.

87-520 Stuart-Hamilton, Ian (U. of Manchester). The role of phonemic awareness in the reading style of beginning readers. *British Journal of Educational Psychology* (London), **56**, 3 (1986), 271–85.

Phonemic awareness is highly correlated with the reading abilities of young schoolchildren. However, no-one has tested how it influences reading. Two experiments compared 20 children possessing phone-

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mic awareness with 20 matched for reading and chronological age who lacked it. In Experiment 1, the children's ability to detect changes in the graphemic structure of isolated words was assessed. In Experiment 2, the children's reading from their schoolbooks was examined by miscue analysis. In comparison with the non-aware group, the aware group was significantly more sensitive to changes in graphemic structure, made greater use of graphemic cues and made fewer 'nonsense' errors in 'normal' reading.

87–521 Verhoeven, Ludo Th. and Boeschoten, Hendrik E. (Tilburg U., The Netherlands). First language acquisition in a second language submersion environment. *Applied Psycholinguistics* (Cambridge), **7**, 3 (1986), 241–56.

In this paper a linguistic description is given of the process of first language acquisition of Turkish children aged 4 to 8 in a Dutch submersion environment in the Netherlands. On the basis of the assumption that language development involves the acquisition of distinct subskills in differential patternings, the development of lexical, morphosyntactic, and pragmatic abilities have been investigated separately. Furthermore, these longitudinal data are compared with cross-sectional language data of five- and seven-year-old children in Turkey. This comparison was made in order to be able to interpret whether the Turkish language skills of native Turkish-speaking children in the Netherlands were showing delay, stagnation, or attrition of skills. The overall results suggest that in the age range of 4 to 8 years the acquisition of first language skills by Turkish children in the Netherlands can best be characterised as stagnated.

Pragmatics

87–522 Albrecht, Wilma R. Ansätze und Ergebnisse der Textverständnis- und Textverständlichkeits-forschung zur Verbesserung von Texten aus der Sozialverwaltung. Ein Forschungsbericht. [Approaches and results of research into text comprehension and comprehensibility in improving documents produced by social insurance authorities. A research report.] *Deutsche Sprache* (Berlin, FRG), **14**, 4 (1986), 345–80.

A survey is given of the results of research into text comprehension and the comprehensibility of texts of relevance to the accessibility of information in official documents. A number of factors are considered, ranging from visual presentation and typographical features, including print size, to the general problem of conditions imposed by the use of the written word. The results of research into comprehension are surveyed, taking in the deductive models which view text as being sequentially, hierarchically and semantically organised, on the one hand, and the inductive approach which sees text comprehension in terms of cost-effectiveness and how much energy the reader is prepared to invest in the decoding process, on the other. Text comprehensibility has been considered from the point of view of readability. This concentrates on surface structure linguistic elements such as word length, sentence length and choice of clause type. The application of readability measures to German is reviewed.

A final section argues that, despite the improvements to be noted in the information leaflets of certain West German federal authorities, other areas could still benefit from the insights of the research under review. The author demonstrates how a computerised letter of notification might be reformulated along the lines recommended in the reported research, so that it would become more readily comprehensible to the general public. The text is a letter from a social insurance agency in which they notify a person that they will pay for a course of medical rehabilitation and also give details of the further steps the insured person needs to take before the course can begin. The test is found to be wanting on several counts. The lines of text are too long, it contains superfluous information and there are too many passive and nominal constructions. It has evidently been constructed from pre-existing blocks of text. The author provides a reformulation which removes these weaknesses. In conclusion, a research project is proposed which would entail several groups of employees calculating their pension entitlements on the basis of the information provided by the pension authorities. This would then be compared with the results arrived at by 'experts'. It is claimed that this would add a significant real-life dimension to the research done so far on text comprehensibility.

87-523. Ariel, Mira. The discourse functions of given information. *Theoretical Linguistics* (Berlin, FRG), **12**, 2/3 (1985), 99–113.

Givenness is a very crucial discourse notion. Apart from being the condition of use imposed on quite a few linguistic forms (definite NPs, presuppositions, anaphoric expressions, gaps, etc.), it can be correlated with specific discourse functions. Givenness markers indicate to the addressee that he has to retrieve some information from memory. Moreover, these markers are specialised as to memory type, so that addressee is instructed where to search for the entity.

However, we cannot claim one unique function for all Given material. Specifically, Given NPs are used to form successful acts of referring. Given VPs create local cohesive ties. Given clauses guide the addressee as to the relevance of the main assertions they are attached to. Whole Given utterances are presented in order to persuade the addressee to accept the other speaker's assertions.

87-524 Blum-Kulka, Shoshana. Modifiers as indicating devices: the case of requests. *Theoretical Linguistics* (Berlin, FRG), **12**, 2/3 (1985),213–29.

Most of the research carried out on speech act modifiers (such as politeness markers and hedges) has been concerned mainly with their social impact. The research reported here shifts the emphasis to the role of modifiers as request pragmatic force indicators. It is argued that speech act modifiers are multifunctional in two distinct ways: first, in that the same occurrence of a modifier can serve both to modify social impact and to signal pragmatic force,

and second, that in their social function, modifiers can both mitigate and aggravate degree of coerciveness. The argument is developed by considering the occurrence of a group of modifiers in request patterns used in Hebrew and English, and by analysing native speakers' assessments of relative requestive force in request patterns with and without modifiers.

87-525 Channell, Joanna (U. of Nottingham). Vagueness as a conversational strategy. *Nottingham Linguistic Circular* (Nottingham), **14** (1985), 3–24.

A range of conversational uses of vague expressions is discussed. These are varied both in the types of discourses from which they come, and in the effects which could be observed. At the same time, there is an important unifying feature, which is that in every case an element of uncertainty is present for at least some participant in the conversation. Where vague language is used to reduce the amount of information given, hearers are uncertain by virtue of being in receipt of less than the full facts. Hearers are usually not aware of a lack of precise information, because the information given is sufficient for the purposes of the particular conversation in which they are taking part. If a speaker is unsure of his subject, or cannot find the right words, and uses a vague expression as a result, uncertainty is communicated to hearers. Hearers in turn are presented

not with something precise, but with a series of options. In the case that the speaker does not use the exact word or expression to name a category, but replaces it with a vague Category Identifier (e.g. *and things*), hearers must be uncertain to some degree of the extension of the category the speaker intends. The same applies to the use of an approximation for a quantity (e.g. *about ten, approximately ten*). In self-protection uses, speakers are perceived as uncertain of their authority, and this is apparent to hearers, who pick up on such cues as presence of a non-Round Number (if it is an approximation). In the deference and politeness examples, hearers are provided with the opportunity to act upon the speakers' utterances in different ways, and so have uncertainty passed on to them, at least until they make a choice.

87-526 Davies, Eirlys E. (U. Mohamed Ben Abdellah, Fez, Morocco). A contrastive approach to the analysis of politeness formulas. *Applied Linguistics* (Oxford), **8**, 1 (1987), 75–88.

This paper is concerned with the kinds of formulaic expression used by speakers of a language as markers of politeness, a knowledge of which is indispensable to the acquisition of communicative competence in

the language. They can present many pitfalls for the learner who is not fully aware of their conditions of use; a failure to grasp the often subtle differences between first-language and target-language for-

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mulas can lead to serious misunderstandings and misjudgements. It is argued here that an explicitly contrastive discussion of formulas in the two languages can be helpful both in improving the learner's productive and receptive performance and in developing a deeper understanding of the foreign culture. A framework for the analysis and comparison of politeness formulas is presented, and examples taken from English and Moroccan Arabic are used to illustrate the kinds of contrast that may arise and the difficulties these may pose for the learner.

87-527 de Hérédia, Christine (GRAL and U. of Paris V). Intercompréhension et malentendus: étude d'interactions entre étrangers et autochtones. [Mutual comprehension and misunderstandings: a study of interactions between foreigners and natives.] *Langue Française* (Paris), **17** (1986), 48–69.

French conversations between native speakers and South American immigrants were analysed with a focus on the occurrence, recognition and repair of misunderstandings. Causes of misunderstanding may be phonetic, grammatical or lexical, but these factors usually interact with context and listener expectation. Recognition may result from the unlikelihood or inappropriacy of apparent meaning, mismatch with gesture or previous utterance, or rejection of listener's reformulation. Repair may be achieved by use of a synonym (speaker), reformulation (listener) or by agreement on a definition, and is sealed by the use of *d'accord*, *OK*, etc. [Numerous examples].

These conversations confirm Bakhtine's view of talking as a two-way process in which the listener is also active. and the speaker also receptive; this negotiation of meaning is important for the evolution of an individual's interlanguage.

87-528 Döpke, Susanne (Monash U., Australia). Discourse structures in bilingual families. *Journal of Multilingual and Multicultural Development* (Clevedon, Avon), **7**, 6 (1986), 493–507.

This study investigated the discourse structures in six bilingual German–English families. The parents followed the concept of one person–one language. The children were taped in natural interaction with their parents. At the time of the first recording, the children were aged either 2;4 or 2;8, and they were taped a second time six months later. The parents' discursive strategies were related to the children's acquisition of the minority language. The analysis showed that children were more likely to speak the minority language if the respective parent employed a similarly or more child-centred mode of interaction than the parent who spoke the majority language.

87-529 Giacomi, Alain (GRAL, Aix-en-Provence) **and de Hérédia, Christine** (GRAL, Paris). Réussites et échecs dans la communication entre locuteurs francophones et locuteurs immigrés. [Success and failure in linguistic communication between native French speakers and immigrants.] *Langages* (Paris), **84** (1986), 9–24.

Interviews between French speakers and Spanish-speaking Latin Americans and Arabs from Morocco (both with little knowledge of French) are studied to reveal the strategies adopted by both parties to understand each other: preventive strategies, facilitating strategies, self-correction, negotiation, clarification, reformulation, definition, feedback – both sides being well aware of possible difficulties the other side may have and of the need for strategies to alleviate them. The reasons for the success or failure of communication are analysed and listed; preconceived ideas and phonetic similarities accounting for many misunderstandings. Success and failure should be seen as two ends of a continuum. Comprehension is a more complex process than production but is crucial to learning. The importance of mutual comprehension in communication has not hitherto been sufficiently recognised. [Examples.]

87-530 Harris, Sandra (Trent Poly., Nottingham). Interviewers' questions in broadcast interviews. *Belfast Working Papers in Language and Linguistics* (Belfast), **8** (1986), 50–85.

Questions in broadcast interviews encode points of view, opinions and attitudes; they do this regardless of the incorporation of 'disputable' propositions as presuppositions. However, there would seem little doubt that interviewers make use of such 'disputable' presuppositions deliberately and consciously in order to obtain what they see as an interesting and 'challenging' interview. Such questions, especially if they are elaborated, also convey information and transmit messages, some of which are highly controversial, to the overhearing audience.

Interviewers pose questions in sequence with similar propositional content (usually in minimally varied syntactic and semantic form) in order to 'persuade' the interviewee to 'answer' the question, i.e. either to supply the missing value (*wh* question) or to confirm or deny a proposition directly (polar question) or to select one or two alternative propositions (disjunctives) and they often make use of increasingly conducive syntactic forms in their questions in order to secure this end.

Because such questions often contain a number of presuppositions and are highly elaborated in structure, it becomes difficult for the interviewee to challenge the presuppositions of the question and to 'answer' it at the same time in his response. If he chooses to challenge the presupposition, he may be seen as evading the question by failing to produce a direct answer and thus lose credibility. If he chooses rather to 'answer' the question, then he tacitly accepts the presuppositions which are encoded as being 'true'. Even if they choose to 'answer' the question rather than challenging its presuppositions, politicians rarely answer directly in terms of 'yes' or 'no' and most often they qualify and/or elaborate their answers. But it is also true that politicians in particular are very often regarded by the public as being evasive, and this image of politicians is a very tenacious one which may well be strengthened by adversary-type interviews.

Following on from this, because they are aware of the requirement of formal neutrality, interviewers may make selective use of deliberate options within the linguistic system to qualify or even negate their personal commitment to the propositions (often in the form of presuppositions) which they put forward in their questions. Various forms of attribution, lexical qualification, auxiliary verbs with low modal values (might, could, can), for example, are in common usage by the majority of interviewers.

Whether these are sufficient in themselves to satisfy the requirement of the neutrality of the institutional voice is open to question.

87-531 Hatav, Galia. Criteria for identifying the foreground. *Theoretical Linguistics* (Berlin, FRG), **12**, 2/3 (1985),265–73.

Recent studies have defined narrative texts by properties of their temporal organisation. This organisation is based on the analysis of Labov (1972) of the 'narrative skeleton' which is the temporal sequence of all the events represented in the same order of the depicted world. Reinhart (1984) claims that this organisation is obligatory.

Labov's approach has found support in recent studies of Foreground and Background. This approach sees the 'narrative skeleton' as forming the foreground, while the rest of the text forms the background. A number of studies have suggested principles for identifying the foreground. However, they rely on examples only, rather than on an exhaustive study of a full corpus. The author's study of the Biblical narrative is based on a full corpus. The Biblical narrative uses the aspect system for the foreground–background distinction. Results indicate that most of the principles suggested by linguists for identifying foreground are irrelevant. The only relevant criterion is the temporal sequence, and the criteria which follow from it.

87-532 Hopper, Robert (U. of Texas, Austin). Switching partners in conversation. *Belfast Working Papers in Language and Linguistics* (Belfast), **8** (1986), 221–42.

A description of cases in which telephone talkers switch partners due to an innovation of electronic semiotics – call-waiting. There are three parties to a call-waiting transaction: the subscriber (whose phone is equipped with a call-waiting device), the partner (who is the party talking to the subscriber at the time of the call-waiting summons) and the summoner (who has unwittingly telephoned the subscriber in overlap with the subscriber/partner conversation). The call-waiting 'beep' is followed by interaction which suspends and puts on hold the subscriber/partner conversation while the subscriber

talks to the summoner. The summoner cannot hear the partner/subscriber talk, nor can the partner hear the summoner/subscriber talk.

Various examples are analysed and it is concluded that partner switching is accomplished by transi-

tional episodes. 'Bracketing activity' (e.g. saying *hold on*) brings events to endings and beginnings embedded within each other. As such, it appears to illustrate members' accomplishments in situation definition.

87–533 Königs, Frank G. (Ruhr-U., Bochum). Bestimmungsfaktoren fremdsprachenunterrichtlicher Interaktion: Begriffliche Abgrenzungen mit Blick auf die Praxis. [Determining factors of foreign language teaching interaction: conceptual delimitations in the light of practice.] *Glottodidactica* (Poznań, Poland), **18** (1986), 13–36.

The notion of norm is reviewed. The linguist's concept of 'norm', located between the abstract language system and the actual use to which language is put by the language user, is inadequate for the discipline of language teaching research. The latter needs to take the various factors involved in the process into consideration: the learner, the teacher, learning objectives and language. For instance, the teacher's view of norm will no doubt differ from the notion of norm to be found in a list of learning objectives. There is hence no entity we can call a 'norm' as such. Three models used for analysing foreign language teaching are discussed: the formal approach (Gaies, 1981; Bellack, 1966), the negotiational approach (after Allwright, 1982, 1984) and the pragmatic–philosophical approach (Edmondson, 1981). The latter is preferred as a descriptive model, although an explanatory frame-

work is lacking. We still need to explain how interactional structures originate.

A final section draws on transcripts of foreign-language classes to differentiate between several types of classroom interaction which can be shown to be associated with the notion of norm. The following nine categories are distinguished and illustrated by means of extracts from the transcripts: (1) setting the norm, (2) checking the norm, (3) reactions to normative actions (either breaking, accepting or negotiating a norm), (4) tolerance of the norm, (5) norm variance, (6) norm persistence, (7) reconsideration of the norm, (8) abandonment of the norm and (9) norm conflict. It is claimed that these categories together with the multidimensional notion of norm they presuppose can be used to great advantage in the analysis of FLT interaction.

87–534 Kozminsky, Ely (Ben Gurion U., Israel). The processing unit in reading. *Theoretical Linguistics* (Berlin, FRG), **12**, 2/3 (1985), 173–83.

The processing unit is proposed as a conceptual framework for analysing language perception and semantic organisation processes. In this work, the processing unit concept is characterised in the reading domain. Reading is viewed as processing information from written material on several levels in parallel. In order to describe the function of the processing unit, three levels are identified: the syntactic, the formal-semantic, and the factual levels, and their corresponding analysis units: the clause,

the proposition, and the fact. The processing unit is characterised as a segment in the read text that includes all the information necessary for its interpretation in the context of this three-level set. The boundary of a processing unit is located at a point in the text where identification of complete analysis units at each one of the three levels is achieved. The method of identifying processing units is demonstrated by describing the processing steps in analysis of several example sentences.

87–535 Latniak, Erich. Analyse politischen Sprachgebrauchs – noch ein Thema der Linguistik? [The analysis of political uses of language – still a topic for linguistics?] *Sprache und Literatur* (Munich, FRG), **58** (1986), 29–50.

The author first reviews the West German post-war academic study of the language of politics. The following chronological periods are distinguished: 1945–1967, 1968–1976 and the period since 1976. Among the characteristics of the first period one finds both inadequate linguistic foundations and the neglect of work done in the USA in the field of

content analysis. The second period saw the expansion of linguistics as an academic discipline and its growing influence on the school curriculum through work on language barriers. The basic idea underlying the work on political language in this period was that of manipulation through language. Since 1976 educational cuts have left their mark on

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both the school curriculum and linguistic research. In spite of this, the author points to three continuing approaches to the linguistic study of political language: the first is value-neutral and oriented towards practical semantics (Heringer, v. Polenz), then there is a group addressing itself to the critique of ideology (Maas, Winckler) and a third group oriented towards producing school teaching materials (Bach, Bachem, Bauer). A brief section sketches the author's suggestions for the analysis of political language use. He stresses the need to focus on reference, predication and illocution as the basic elements in the analysis and rejects the use of a single model such as Bach's (1985) 'argumentation', since

it does not cover all cases, e.g. the use of political symbols and rituals. A final section demonstrates the application of this approach. An analysis is given of an advertisement placed in a German newspaper by a West German employers' federation (the BDA) in 1985. In it they argued there is no such thing as a 'political strike in a democracy'. Referentially defined objects in the advertisement such as 'Staat', 'Demokratie', 'Streik' and 'Recht' are analysed as are the statements made about them. The analysis stresses the importance of reference or lack of reference in the text to facts which the reader may be assumed to know.

87–536 Laurian, Anne-Marie (CNRS, Paris). Some aspects of humour in scientific communication. *Contrastes* (Paris), A5 (1985), 27–42 (special issue).

A topology for further studies on humour in scientific communication is proposed which involves five assumptions. Humour in scientific communication (1) depends on the level of communication on which the text is located, (2) is related to the medium it uses, (3) is related to a certain idea of the truth. (4) In a hierarchical situation there is no space for humour. (5) Humour is difficult to translate but translation can create humorous phrases.

87–537 Moeschler, Jacques (U. of Geneva). Pragmatique conversationnelle: aspects théoriques, descriptifs et didactifs. [Theory and practice of analysis of conversation and its application to teaching.] *Etudes de Linguistique Appliquée* (Paris), **63** (1986), 40–9.

Analysis of conversation as developed at Geneva is presented as an extension to discourse in the widest sense of syntactic and semantic analysis applied to the statement. A fragment of a broadcast interview (from a programme called *Apostrophes*) is analysed to illustrate how this kind of approach can throw light on aspects which a traditional analysis in terms of minimal context and acceptability would have difficulty in clarifying. There may be possible applications for language teaching: in relation to literary, particularly theatrical, discourse; in promoting awareness of the difference between the standard language and language as actually used in conversation; in acquiring an understanding of how conversations are structured and the constraints which operate. The Geneva approach needs to be tried out and its usefulness to language teaching assessed.

87–538 Owen, Marion (Acorn Computers, Cambridge). The conversational functions of 'anyway'. *Nottingham Linguistic Circular* (Nottingham), **14** (1985), 72–90.

The Department of Linguistics, Cambridge University, has carried out research into how speakers structure topics, by examining various aspects of a number of conversational devices, amongst which was the expression *anyway*. Four major uses and functions of the expression were identified, two of which are defined as conversational, in which reference is required of the speaker to principles of conversational organisation, and two as semantic/pragmatic, in which emphasis is placed by the speaker on meaning.

Conversational functions operate where *anyway* introduces closing sequences and resumes unresolved topics, or sets aside inserted topics, or where speaker indicates s/he has nothing more to say and offers the floor to another interlocutor. Semantic/pragmatic functions are identified when the operator uses *anyway* to mark an enquiry as unconnected with previous utterance/s, or when s/he prefaces an utterance with *anyway*, implying irrelevance of an assertion just made.

From the analysis, which is based on numerous illustrative examples, it is concluded that *anyway* is connected less with a topic than with the structuring of conversation.

87-539 Spolsky, Ellen. Toward a cognitively responsible theory of inference: or, what can synapses tell us about ambiguity? *Theoretical Linguistics* (Berlin, FRG), **12**, 2/3 (1985), 197-203.

The recent fascination of literary and linguistic theorists with the brain sciences seems predicated on an expectation that the latter will ultimately reveal the existence of basic mechanisms of interpretation which are binary, hard-wired, and generally free from the ever-present ambiguity of human language interchange. The information already available to us about communication between cells of the nervous system at the synapse reveals this to be a misguided hope. The neurophysiology of the synapse reveals the existence, at the cellular level, of the biological equivalent of inference. The nervous system is apparently no different at the level of its basic components than at the level of higher level human language behaviour. It is built to cope with insufficient or fragmentary data, and to make decisions when necessary in spite of the insufficiency of the input.

The implications for theory building are important. A system of well-formedness rules will not be sufficiently flexible to describe language interpretation. A preference system which can describe not only well-formedness conditions, but also necessary conditions that can be satisfied along a gradient, and conditions which are not necessary but are only typical (both gradient and non-gradient) would seem to be more responsive to biological reality.

87-540 Stroinska, Magda. Pragmatics of scientific discourse. *Work in Progress* (Edinburgh), **19** (1986), 1-11.

Conversational and scientific discourse can both be considered as communicative interaction. Each displays pragmatic similarities, with successful scientific discourse having the following well-defined properties: topic, audience, knowledge of the audience, purpose, and extended time for sentence production and interpretation, especially in the case of writing and reading scientific texts. Two major distinguishing features, however, are a lack of subjectivity and self-reference in scientific discourse, although various ways exist for expressing both, for example, the use of impersonal pronouns, and passive constructions. Scientific discourse may well constitute a useful field for the analysis of relations between language form and communicative functions, with the added advantage of a restricted environment.

87-541 Tomlin, Russell S. The identification of foreground – background information in on-line oral descriptive discourse. *Papers in Linguistics* (Champaign, Ill), **19**, 4 (1986), 465-94.

The identification of discourse relations, like foreground–background information, in natural text data represents a critical methodological issue in research into the functions of syntax in discourse. Currently, methods of identification are either syntax-dependent or exclusively introspective, resulting in circular or vague argumentation concerning the role of syntactic form in coding discourse relations. An empirically grounded methodology for identifying foreground–background information in natural discourse data is presented and motivated. An experiment is described in which 15 native English-speaking subjects described on-line a 108-second animated videotape. Results show that independently determined event significance correlates significantly with the frequency with which subjects report events. These results permit the formulation of a syntax-independent and operationally explicit methodology for identifying foreground–background information in on-line descriptive discourse.

87-542 Weizman, Elda. Towards an analysis of opaque utterances: hints as a request strategy. *Theoretical Linguistics* (Berlin, FRG), **12**, 2/3 (1985), 153-63.

Within the framework of CCSARP (Cross Cultural Speech Act Realisation Patterns) project, the author studies the relations between sentence meaning and indirect speaker's meaning in Hints, when used for the realisation of requests. A model is postulated whereby a distinction is made between scales of illocutionary *v.* propositional opacity, each scale ranging from extreme opacity to relative transparency. Utterances identified as Hints are subclassified and located on both scales. Various combinations of opacity-types are examined.

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