Research in the supporting sciences

Linguistic theory

Edge, Julian (Aston U., Birmingham). The Dance of Shiva and the 93-351 linguistics of relativity. Applied Linguistics (Oxford), 14, 1 (1993), 43-55.

One possible criticism of formal syntactic theory is that it is based on a philosophy and a set of metaphors which appear superseded even in the physical sciences where they were developed. Borrowing again from the physical sciences, this paper argues for linguistic theory with a philo-

sophical basis in interrelatedness. The Dance of Shiva is adopted as a relevant and explanatory metaphor, and clause-relational analysis is identified as an approach which is contributing to linguistic theory in ways which are significant for applied linguistics.

93-352 Nehls, Dietrich. An analysis of 'verbal aspect' as a cross-linguistic category – implications for language teaching. IRAL (Heidelberg, Germany), 30, 4 (1992), 255-80.

In this article, verbal aspect is defined in accordance with the classic Slavic theory of aspect as an opposition between a perfective and an imperfective function. The verb in question is modified morphologically without losing its fundamental meaning. The author shows that such a verbal aspect exists not only in Slavic languages but in English, too, and - though only with reference to the level of the past – in Romance languages. The differences of aspect in the aforementioned languages are

nevertheless considerable, especially where it is the perfective or imperfective aspect which is marked.

After a review of the mutual links between 'verbal aspect', 'time', 'type of action' and 'type of text', the basis of a method is presented with English as an example, which allows the introduction of the difficult semantics of the opposition of 'perfective aspect' and 'imperfective aspect' in the teaching of foreign languages.

Phonetics and phonology

93–353 Browman, Catherine P. (Haskins Laboratories) and Goldstein, Louis (Yale U.). Articulatory phonology: an overview. *Phonetica* (Basel), **49**, 3/4 (1992), 155-80.

An overview of the basic ideas of articulatory phonology is presented, along with selected examples of phonological patterning for which the approach seems to provide a particularly insightful account. In articulatory phonology, the basic units of phonological contrast are gestures, which are also abstract characterisations of articulatory events, each with an intrinsic time or duration. Utterances are modelled as organised patterns (constellations) of gestures, in which gestural units may overlap in time. The phonological structures defined in this way provide a set of articulatorily based natural classes. Moreover, the patterns of overlapping

organisation can be used to specify important aspects of the phonological structure of particular languages, and to account, in a coherent and general way, for a variety of different types of phonological variation. Such variation includes allophonic variation and fluent speech alternations, as well as 'coarticulation' and speech errors. Finally, it is suggested that the gestural approach clarifies our understanding of phonological development, by positing that prelinguistic units of action are harnessed into (gestural) phonological structures through differentiation and co-ordination.

Sociolinguistics

93–354 Driessen, Geert (Catholic U. of Nijmegen, The Netherlands). First and second language proficiency: prospects for Turkish and Moroccan children in the Netherlands. Language, Culture and Curriculum (Clevedon, Avon), 5, 1 (1992), 23 - 40.

This article reports a large-scale investigation among schools. The focus is on these children's proficiency Turkish and Moroccan children in Dutch primary in, respectively, Turkish and Arabic, and in Dutch,

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and on the development of skills in both languages. As regards proficiency in the first language, Turkish and Moroccan children appear to differ widely: levels of Turkish are reasonable, but the levels of Arabic are poor. Comparative research in Morocco shows, however, that, given the circumstances, the level of Arabic in the Netherlands is probably not as poor as it appears at first sight, given the special difficulties faced by learners of written Standard Arabic. On the other hand, data relating levels of achievement in Arabic to teaching time indicate that additional instruction in the home language is unlikely to change the situation. The prospects for Turkish are less gloomy. As regards proficiency in Dutch, Turkish and Moroccan pupils still perform poorly, even after controlling for length of stay in the Netherlands and socio-economic background. This means that, in the short term, they are unlikely to attain the same level of Dutch language proficiency as their Dutch peers.

93–355 Foley, Kathryn S. (Ontario Inst. for Studies in Education). Decontextualised language development in home and school interactions. *Bulletin of the CAAL* (Montreal, Canada), **13**, 2 (1991), 69–83.

Some results of a study which focused on the reading and decontextualised language development of eight Spanish first-language children in Toronto are presented in this article. The home interactions of a good and poor reader were compared to determine how they differed in terms of language

use and how they related to the classroom interaction. The home interaction of both children differed from that of the classroom. Nevertheless, the good reader's home interaction was closer to the classroom interaction in the extent and manner in which decontextualised language was used.

93–356 Garrett, Peter (University of Wales, Bangor). Accommodation and hyperaccommodation in foreign language learners: contrasting responses to French and Spanish English speakers by native and non-native recipients. *Language and Communication* (Oxford), **12**, 3/4 (1992), 295–315.

Native and non-native English speakers' reactions to the accents of French and Spanish learners of English are considered in the light of recent accommodation theory. Judgements along seven dimensions of perceived personality (e.g. pleasant, irritating, intelligent) were elicited for learners with low convergence to target norms (i.e. a broad accent), high convergence (mild accent) and hyperaccommodation (hypercorrection) [results with discussion]. The evaluation of the results provides important lessons for EFL learners. For example, mild accents seem to carry an overall advantage, with broad and hypercorrect ones likely to fare

badly in domains such as the home, where the need for solidarity is high. Learners in status-stressing domains such as government and school are more likely to be disadvantaged by a broad accent.

Looking to the future, further research is required using speakers of other (including non-European) languages as judge and judged, and a plea is made for linguistic rigour in such studies. It is hoped that future work will go beyond the language laboratory and into the domain of language in action, for language awareness of this kind gives learners and native speakers alike opportunities to make informed decisions about their language behaviour.

93–357 Holmes, Janet and others. (Victoria U. of Wellington). Language maintenance and shift in three New Zealand speech communities. *Applied Linguistics* (Oxford), **14**, 1 (1993), 1–24.

Drawing on the results of sociolinguistic research in three ethnically different communities in Wellington, New Zealand, this paper first explores and illustrates the processes of language shift and revival identified in Fishman's (1985) model. Members of the Tongan, Greek, and Chinese communities were interviewed, and data were collected on their language proficiency, patterns of use in different contexts, and attitudes to their languages. The progression outlined by Fishman from high proficiency in the ethnic language to the need for

language revival is clearly observable. The second part of the paper illustrates the ways in which the macro-level factors identified by Fishman as predictors of successful language maintenance are realised at the community level. Generalising from detailed observations in the three New Zealand communities, a number of factors which seem to inhibit language shift and support maintenance are described and related to the predictive criteria identified by Fishman's census-based research.

Research in the supporting sciences

93–358 Huot, Diane and Lelouche, Ruddy (U. Laval). Les variables de la situation de communication dans l'enseignement du français langue second ou étrangère: quelques difficultés de définition. [Variables in communication situations in the teaching of French as a second or foreign language: some difficulties of definition.] *Bulletin of the CAAL* (Montreal, Canada), **13**, 2 (1991), 85–94.

There is an increased awareness that the diversity of sociolinguistic usages is gradually becoming apparent in language teaching. The identification of characteristics regarding communication situations, and the accurate definition of the nature of relationships between speakers henceforth constitute aspects to which the learner must pay attention when he or she strives to produce a message in the second language that takes into consideration all the parameters of the communication situation and the means that the language offers to the learner. But if

the students have learned that each variable exerts itself to order a given linguistic element, they surely know less well the rules which guide the native speaker in order to produce a given form in a given situation, since these are not formulated explicitly. This article outlines the progress of a research project in which the authors are examining, in a computerised manner, the action of all variables of the communication situation and the organisational rules of these variables in interactions concerning greetings.

93–359 Kremer, Dieter. Zur Rolle des Portugiesischen in einem Europa der Zukunft. [The role of Portuguese in the Europe of the future.] *Die Neueren Sprachen* (Frankfurt am Main, Germany), **91,** 4/5 (1992), 396–407.

The role of the Lusophone cultural and economic region, and thus of Portuguese and Brazilian as well, has not been given the consideration it deserves. It must be borne in mind, however, that this linguistic and cultural area does not represent a monolithic structure. Moreover, Portuguese has only been inadequately described and researched. Thus, Portuguese is something of an 'understated' international language, and in that respect is in much the same position as German. Portuguese and Brazilian play only a marginal role in the German education system, at least in the schools. The fact that the foreign cultural and language policy of the Lusophone countries leaves a great deal to be desired has negative consequences for the status of Portuguese in the schools and colleges or universities. Nevertheless, in view of the principle of plurality in foreign language offerings, the teaching of Portuguese can be expected to expand in the future. The prospects for such a development are indicated in the KMK report on Portuguese as a foreign language in the schools.

93–360 Nwoye, Onuigbo G. (U. of Benin, Nigeria). Linguistic politeness and socio-cultural variations of the notion of face. *Journal of Pragmatics* (Amsterdam), **18**, 4 (1992), 309–28.

Politeness phenomena have been studied from multidimensional perspectives. A subset of these phenomena, linguistic politeness, or the manifestation of correct and proper socially sanctioned and expected behavior through the verbal channel, has equally been the concern of interactional sociolinguists, social psychologists, ethnomethodologists, and anthropologists. Although no consensus definition of linguistic politeness has emerged, there is general agreement that it involves verbal strategies for keeping social interaction friction free. The actual operations of these strategies in specific social settings tend to differ to the extent that the cultures operational in those settings differ. This paper has three objectives. First, it reviews some current approaches to the study of linguistic politeness as well as some recent work on non-Western politeness. Secondly, Brown and Levinson's notion of face is discussed to show that as formulated, it differs from the ways the Igbo of Nigeria conceptualise face; the notion of face in Igbo has a dual manifestation: 'group' and 'individual' face. Thirdly, the paper relates the notion of face to the notion of imposition, arguing that many activities that would be regarded as threats to face, and therefore as impositions, in Western societies, are regarded differently in Igbo society.

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93–361 Omodiaogbe, Sylvester A. 150 years on: English in the Nigerian school system – past, present, and future. *ELT Journal* (Oxford), **46**, 1 (1992), 19–28.

This article examines the place of English in the Nigerian education system. It sees the introduction of English as a product of evangelical expediency, in which missionaries passed the language baton to colonial administrators until English became the official language of the country. It is noted that even after political independence from the colonial masters, English still occupies pride of place in Nigeria, especially in the formal school system. The fact that Nigeria is a multilingual country with as many as 450 languages is discussed; and the

implications of and reactions to the constitutional and National Policy on Education emphasis on three major Nigerian languages are examined. In spite of the inchoate, half-hearted attention being given to indigenous languages in the school system nowadays, the prospects for English in the school system and in Nigerian society are still very bright. But to survive, English must submit itself to some modifications, adapting to the Nigerian linguistic environment.

93–362 Pfeiffer, Waldemar. Eine Sprache für alle oder für jeden eine? Sprachenvielfalt und "Interkulturalität" als Basis einer europäischen Integration. Ein Essay aus der Sicht eines Polen. [One language for everyone, or for each state? Multilingualism and 'interculture' as a basis for European integration – a Polish view.] *Die Neueren Sprachen* (Frankfurt am Main, Germany), **91,** 4/5 (1992), 369–74.

The author shifts away from the postulate of giving equal status to the official European languages in favour of a regulation which, on the one hand, would establish English as the international medium of communication in Europe in order to ensure pan-European communication (at the highest possible level), but, on the other, would promote the supraregional development of (national) languages in certain areas in order to guarantee a multilingual and multicultural setting as a prerequisite for political stability. A quantification of the concept 'communicative value of a language' is proposed in this connection.

93–363 Poole, Deborah (San Diego State U.). Language socialisation in the second language classroom. *Language Learning* (Ann Arbor, Mich), **42**, 4 (1992), 593–616.

This paper examines the kinds of cultural message a second language teacher displays through classroom interaction. The study analyses teacher/student interaction in two beginning ESL classes in light of the language socialisation perspective articulated by Ochs and Schieffelin. This approach views the acquisition of linguistic and sociocultural knowledge as integral to one another, and points to the pervasive influence of cultural norms and ideologies on various forms of expert-novice communication. The data demonstrate that routine interactional sequences in these classrooms are consistent with a number of Ochs and Schieffelin's interpretations of middleclass American caregiver language and suggest that a teacher's language behaviour is culturally motivated to an extent not generally acknowledged in most L2 literature. Discussion focuses specifically on how classroom discourse features encode cultural norms and beliefs with respect to (a) expert accommodation of novice incompetence, (b) task accomplishment, and (c) the display of asymmetry.

93–364 Stavans, Anat (Bar Ilan U., Israel). Sociolinguistic factors affecting codeswitches produced by trilingual children. *Language, Culture and Curriculum* (Clevedon, Avon), **5**, 1 (1992), 41–53.

The sociolinguistic variables known to affect an adult bilingual's speech, in particular setting, situation and participant, do not have the same effect on the bilingual child's speech. These variables, established in previous research on codeswitching among bilingual adults, are either irrelevant or acquire a different function for the bilingual child. This study examines switches produced in spontaneous speech over a period of 15 months by two trilingual children acquiring Hebrew, Spanish and

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English. Data collection began when the older subject was 5:5 years old and the younger subject was 2:6 years old. The switches were analysed both grammatically and according to specific sociolinguistic features. The analysis shows that (a) the participant's linguistic background (i.e. monolingual, bilingual or trilingual) influences the quantity and type of switches; (b) the topic-related switches are culture-bound; and (c) the situation of the switches basically refers to discourse routines, such as requests, affirmations and negations.

93–365 Valencia, Jose Fco. and Cenoz, Jasone (U. of the Basque Country, San Sebastian, Spain). The role of bilingualism in foreign language acquisition: learning English in the Basque Country. *Journal of Multilingual and Multicultural Development* (Clevedon, Avon), **13**, 5 (1992), 433–49.

This paper deals with the acquisition of a third language (English) and its relationship to psychosocial and socio-educational variables in a bilingual educational context, the Basque Country. Subjects were 321 secondary school students from two linguistic programmes: models A (Spanish, vehicular language) and D (Basque, vehicular language). The subjects answered questionnaires which measured both dependent and independent variables. The dependent variables were those related to English achievement, including the four language skills (reading, listening, speaking, writing) and a test of vocabulary and grammar. The independent variables were four dimensions of bilingualism (early bilingualism, competence in Basque language, family bilingualism and linguistic model) and four measures of social motivation (attitude towards learning English, effort, residence in English speaking countries and English language instruction outside school). Manova analyses showed a significant positive effect of bilingualism on English achievement. Using a Structural Equations Program, the relationship among the variables was tested and a causal model proposed. This model showed that the relationship between bilingualism and L3 acquisition was indirect, social motivation being the mediating variable. These results are discussed with respect to the association between bilingualism and third language acquisition in different contexts.

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93-366 Boloh, Yves (U. Paul Valéry, Montpellier) and Champaud, Christian (C.N.R.S., Paris). The past conditional verb form in French children: the role of semantics in late grammatical development. *Journal of Child Language* (Cambridge), 20, 1 (1993), 169-89.

As shown by Bowerman (1986), it has proved remarkably difficult to find clear-cut interpretations of why children face problems with conditionals. The present study reassesses a part of this puzzle by analysing four- to eight-year-old French children's acquisition of conditional verb forms. Relevant data in the literature and results of an experiment designed to gain information on the temporal meaning of young children's past conditional verb forms are presented and discussed. Among others, they are shown to provide weak support for interpretations stressing the role of conceptual problems and related mapping problems. Meeting one of Slobin's (1985) proposals, an interpretation is suggested that views the lateness of the past conditional verb form as due to an unexpected juxtaposition of 'possibility' and 'non-possibility' in its semantic representation. It is argued that such a juxtaposition cannot be achieved on the sole basis of cognitive development and that it requires the preliminary mastery of the conditional verb form.

93–367 Cook, Vivian J. (U. of Essex). Evidence for multicompetence. *Language Learning* (Ann Arbor, Mich), **42**, 4 (1992), 557–91.

The term 'multicompetence' describes 'the compound state of a mind with two grammars'. This paper reviews evidence addressing two questions: (1) Do people who know two languages differ from people who only know one in other respects than simply knowledge of an L2? L2 users differ from monolinguals in L1 knowledge; advanced L2 users differ from monolinguals in L2 knowledge; L2 users have a different metalinguistic awareness from monolinguals; L2 users have different cognitive

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processes. These subtle differences consistently suggest that people with multicompetence are not simply equivalent to two monolinguals but are a unique combination. (2) Do people who know two languages have a merged language system rather than two separate systems? The L1 and L2 share the same mental lexicon; L2 users codeswitch readily; L2 processing cannot be cut off from L1; both languages are stored in the same areas of the brain; L2 proficiency relates to L1 proficiency. This evidence suggests merged systems at some level in some areas, even if some of it is open to other interpretations. A final section discusses more general issues. Much SLA research is biased by adopting the monolingual as a norm rather than the multicompetent speaker. Multicompetence distinguishes diachronic transfer during the learner's acquisition from synchronic transfer between the two languages at a single moment of time. Multicompetence starts when there is systematic knowledge of an L2 that is not assimilated to the L1. Holistic multicompetence is seen as an offshoot of polylectal grammar theory applied to monolinguals. Language teaching should try to produce multicompetent individuals, not ersatz native speakers.

93–368 Goldfield, Beverly A. (Rhode Island Coll.). Noun bias in maternal speech to one-year-olds. *Journal of Child Language* (Cambridge), **20**, 1 (1993), 85–99.

This study examines the distribution of nouns and verbs in maternal speech to one-year-olds. Mothers and children were videotaped during toy play and non-toy play. Nouns and verbs in maternal speech were coded for frequency, sentence position and occurrence with grammatical inflections. Maternal speech was also coded for utterances that prompted the child to produce a noun or a verb. Frequency of nouns and verbs varied with context. There were more noun types and tokens during toy play, and more verb types and tokens during non-toy play. Nouns occurred more often than verbs in shorter maternal sentences, in sentence-final position, and with fewer grammatical inflections. Mothers also more often prompted their children to produce nouns. There was a significant positive correlation between frequency of noun types and tokens during toy play, and the proportion of nouns in children's first 50 words.

93–369 Greenfield, Patricia M. (U. of California, Los Angeles) and Savage-Rumbaugh, E. Sue (Georgia State U. and Emory U.). Comparing communicative competence in child and chimp: the pragmatics of repetition. *Journal of Child Language* (Cambridge), **20**, 1 (1993), 1–26.

Through an analysis of chimpanzee-human discourse, the authors show that two Pan troglodytes chimpanzees and two Pan paniscus chimpanzees (bonobos) exposed to a humanly devised symbol system use partial or complete repetition of others' symbols, as children do: they do not produce rote imitations, but instead use repetition to fulfil a variety of pragmatic functions in discourse. These functions include agreement, request, promise, excitement, and selection from alternatives. In so doing, the chimpanzees demonstrate contingent turn-taking and the use of simple devices for lexical cohesion. In short, they demonstrate conversational competence. Because of the presence of this conversational competence in three sibling species, chimpanzees, bonobos, and humans, it is concluded that the potential to express pragmatic functions through repetition was part of the evolutionary history of human language, present in our common ancestor before the phylogenetic divergence of hominids and chimpanzees.

In the context of these similarities, two interesting

differences appeared: (1) human children sometimes used repetition to stimulate more talk in their conversational partner; the chimpanzees, in contrast, use repetition exclusively to forward the non-verbal action. This difference may illuminate a unique feature of human linguistic communication, or it may simply reflect a modality difference (visual symbols used by the chimpanzees, speech used by the children) in the symbol systems considered in this research. (2) A second difference seems likely to reflect a true species difference: utterance length. The one- and two-symbol repetitions used by the chimpanzees to fulfil a variety of pragmatic functions were less than half the maximum length found in either the visual symbol combinations addressed to them by their adult human caregivers or the oral repetitions of two-year-old children. This species difference probably reflects the evolution of increased brain size and consequent increased memory capacity that has occurred since the phylogenetic divergence of hominids and chimpanzees four to seven million years ago.

93–370 Hickey, Tina (Linguistics Inst. of Ireland, Dublin). Identifying formulas in first language acquisition. *Journal of Child Language* (Cambridge), **20,** 1 (1993), 27–41.

With the increase in interest in formulas, or apparently non-productive utterances in children's speech, a range of definitions has emerged and sometimes conflicting criteria have been proposed for their identification. These definitions of formulas are compared, and the criteria of Brown (1973), Wong Fillmore (1976), Peters (1983) and Plunkett (1990) for the recognition of formulas are reviewed. A preference rule system is proposed, which distinguishes necessary, typical and graded conditions for the recognition of formulas. Using these conditions, some of the formulas found in the data of one child acquiring Irish between 1;4 and 2;1 are examined. Issues such as length of units, frequency of occurrence and appropriateness of use are discussed. The methods developed in this study could be used to assess the importance of formulas in the language acquisition of other children.

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93–371 Nelson, Katherine (City U. of New York Graduate Center) and others.
Nouns in early lexicons: evidence, explanations and implications. Journal of Child Language (Cambridge), 20, 1 (1993), 61–84.
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Many theories of grammatical and lexical acquisition assume that children learn predominantly nouns, and specifically names of objects, when they first begin to acquire words in the second year. The authors show that the noun bias in early vocabularies is far from universal, and that it rests only in part on the acquisition of object names. An analysis of vocabulary composition from 45 children at 1;8 indicates that more nouns are acquired than all other word classes, but that of the nouns acquired only about half are the names of basic level object classes

(BLOCs). An examination of the use of nouns in mother-child discourse shows that non-object words referencing locations, actions and events, for example, are used in distinctive pragmatic and grammatical contexts which might enable a child to grasp the word's use and eventually its meaning. It is concluded that a theory of lexical acquisition in discourse context is required to explain word learning at all levels and for all word types. Implications for semantic bootstrapping theories are considered.

93–372 Plunkett, Kim (U. of Oxford). Lexical segmentation and vocabulary growth in early language acquisition. *Journal of Child Language* (Cambridge), **20**, 1 (1993), 43–60.

The identification of appropriate lexical segmentations of the speech signal constitutes a problem for the language learner and the child language researcher alike. Articulatory precision and fluency criteria for identifying formulaic expressions, sublexical forms and target lexemes in linguistic productions are defined and applied to the analysis of two Danish children's language development between the ages of 1;0 and 2;0. The results of this analysis are compared to the results of applying standard distributional and frequency criteria in the tabulation of mean length of utterance and vocabulary profiles for both standard and non-standard lexical segmentations. It is argued that although the two methods yield converging profiles of development during the latter part of the period studied, articulatory precision and fluency criteria offer a more powerful tool for identifying alternative segmentation strategies in early language acquisition. Profiles of vocabulary development for these two children suggest that the solution to the segmentation problem may be an important trigger for their vocabulary spurts.

93–373 Segalowitz, Norman and others (Concordia U., Montreal). Lower-level components of reading skill in higher-level bilinguals: implications for reading instruction. *AILA Review* (Madrid), **8** (1991), 15–30.

Advanced adult bilinguals who are fluent in both their languages may nevertheless be unable to perform reading tasks as quickly or easily in their L2 as in their L1. Skilled readers function on two levels: higher-level skills such as comprehension, use of context and integration of text with previous knowledge; and lower-level skills relating to word recognition which in skilled readers are fully automatised and relatively effortless. Research has shown that poorer processing at the word recognition level, analogous to differences between weak and strong L1 readers, is associated with slower reading by otherwise advanced bilinguals.

Training to improve L2 reading performance needs to focus on the lower-level skills and provide

adequate repetitive practice, while at the same time creating an appropriate training environment which resembles the real world reading situation. Such training not only improves reading efficiency at this level but also frees cognitive resources for other higher aspects of the reading process.

93–374 Smith, Edward E. (U. of Michigan) and Swinney, David A. (City U. of New York). The role of schemas in reading text: a real-time examination. *Discourse Processes* (Newark, NJ), **15**, 3 (1992), 303–16.

This article is concerned with how people process text in the presence or absence of a relevant schema. In particular, it focuses on the effects of schema availability and concept repetition on both on-line integration and memory for text. Subjects were required to read 'vague' texts (like Bransford and Johnson's, 1972, well-known 'washing clothes' story) and their reading time for each sentence in each text was recorded. Half the texts were preceded by a title that activated a relevant schema, whereas the other half were presented without relevant schemas. Overall, reading time per sentence was substantially longer when reading without a schema than with one. The amount of extra time needed to read a sentence when no schema was available was the same at all points in the story. Also, when no schema was available reading time per sentence decreased with the number of repeated concepts in the sentence, whereas when a schema was available concept repetition had little effect. These results, along with the finding that schemas facilitated recall, indicate that: (a) schemas affect on-line comprehension, not just recall; and (b) reading without a schema involves the use of repeated concepts to connect propositions and perhaps the use of an abstract default schema to aid integration.

Pragmatics

93–375 Early, Margaret (U. of British Columbia). Discourse analysis in Englishas-a-second-language instruction: the Vancouver study. *Bulletin of the CAAL* (Montreal, Canada), **13**, 2 (1991), 23–36.

The purpose of this paper is to consider some ways in which discourse analysis may be helpful as a component of the educational experience of students for whom English is a second language (ESL). The paper grows out of an ongoing project in the schools of Vancouver, British Columbia, which examines how to give ESL students access to school knowledge while simultaneously helping them to develop the language of learning and teaching. Three studies conducted in project classrooms are presented to illustrate how teachers and students can work together on highly interactive tasks which allow learners to engage in various sorts of formfunction, sociolinguistic and semantic analysis, while they are at the same time developing their contentarea knowledge and thinking skills.

93–376 Gosden, Hugh (Tokyo Inst. of Technology). Discourse functions of subject in scientific research articles. *Applied Linguistics* (Oxford), **14**, 1 (1993), 56–75.

The writing of the professions has been of increasing interest to social scientists and discourse analysts in recent years. Insights gained from a study of how professionals successfully communicate in academic and business settings help inform courses designed to support the writing activities of novice professionals-in-training. Moreover, with a focus on academic-scientific genres, practitioners in traditional L2 fields are increasingly becoming aware of the work carried out in L1 fields and how they and their students share many common concerns. For example, it is crucial that all novice writers of research articles (RAs) become aware of the social dialogic nature of scientific discourse and develop the skills required in the appropriate use of linguistic resources which realise such social interaction.

This paper reports on one important component of language by means of which scientific RA writers structure textual interaction with the external community, namely choices of unmarked theme, i.e. grammatical Subject. The functional analysis presented here clearly reveals how the changing discourse roles of Subjects throughout scientific RAs strongly characterise this genre. **93–377** Levy, Elena T. (U. of Connecticut and Haskins Labs.) and McNeill, David (U. of Chicago). Speech, gesture, and discourse. *Discourse Processes* (Norwood, NJ), **15**, 3 (1992), 277–301.

In this article it is argued that on-line linguistic choices are made in a matrix of continuous discourse connections. The hypothesis that communicative dynamism (CD) is this representation of the whole in the parts is investigated. CD is viewed as a graded variable that can be measured only with respect to large stretches of discourse. Based on the authors' analysis of extended narrative and conversational data, they find that CD directly correlates with the quantity of linguistic material devoted to a reference. They identify two strategies with which this is accomplished: one 'constructive', the other 'anticipatory'. They find that gestures of the kind cooccurring with speech also reflect the communicative status of the utterance. Initial positions of explicitly delineated narrative units are accompanied by more gestures (both pointing and 'beats'). A similar phenomenon appears in а highly unstructured conversation, with pointing gestures accompanying initial references to topics. They interpret these correlations of the quantity of gesture and the quantity of linguistic referring material as reflecting an underlying unity of speech and gesture. Thought itself, Vygotsky argued, is the formation of psychological predicates - elements of discontinuity from the existing context. A speaker highlights these discontinuities by adding to the quantity and multiplying the avenues of departure from the context in both speech and gesture.

93–378 Roulet, Eddy (U. of Geneva). L'enseignement–apprentissage de la compétence discursive et l'analyse du discours. [The teaching/learning of discourse competence and discourse analysis.] *Bulletin of the CAAL* (Montreal, Canada), **13**, 2 (1991), 7–22.

Starting with a definition of the notion of discourse competence, the author explores the implications of research in French discourse analysis for mothertongue and second-language didactics. He then develops a modular approach to discourse, which takes into account 15 linguistic, discursive and situational dimensions as well as their interrelations. This approach should offer to didacticians not only a better representation of discourse, but also instruments which should facilitate the elaboration of educational materials and evaluation tools.

93–379 Sovran, Tamar (Hebrew U. of Jerusalem). Between similarity and sameness. *Journal of Pragmatics* (Amsterdam), **18**, 4 (1992), 329–44.

The aim of this paper is to confront some logically and philosophically puzzling problems, raised by philosophers and cognitive psychologists, with a semantic description of the concept of 'similarity' and with the meaning and the use of operators of similarity in certain languages. 'Similarity' is shown to be a cluster of notions rather than a unitary concept. By contrast, there is a certain unity of the items in the group of similarity subtypes, in that a unifying mechanism underlies them and justifies gathering them under one general, although vague concept. The various subtypes of similarity (such as duplication, type/token relations, analogy, etc.) show various modes of equilibrium between unifying and separating elements. A study of the nature and the etymology of grammatical and lexical operators of similarity (e.g. 'as', 'like', '(the) same' in English; 'kemo', 'oto', 'dome' in Hebrew; and 'als' in German) supports this claim. Finally, as to Austin's claim that similarity words are adjusters, the present study exemplifies this by showing how similarity operators add to the basic discrete nature of the processes of labelling, recognising and naming, a continuous counterpart which affords flexibility and expandability to the cognitive process. The puzzling nature of the concept of similarity is shown to be rooted in this peculiar cognitive function.

93–380 Trabasso, Tom (U. of Chicago) and Nickels, Margaret (Northwestern U.) The development of goal plans of action in the narration of a picture story. *Discourse Processes* (Norwood, NJ), **15**, 3 (1992), 249–75.

The construction of coherent narrations of events in a picture storybook by children was studied. A causal network discourse analysis was applied to the narrations by children, 3, 4, 5, and 9 years of age, and adults, 20 years and older. The analysis was successfully applied at the clausal level by deriving interacting causal network representations for the perspective of each character in each of the narrations. The structure and content of the network representation of the main character were analysed in detail. The analysis indicated that 9-year-olds and adults narrate according to a hierarchical goal plan of action. It also showed striking developmental differences from age 3 to 5. The 3-year-old children described states and neutral outcomes that are unrelated to the central theme. The 4-year-olds, in contrast, encoded actions relevant to the central theme but omitted goals and purposes. The 5-year-olds added these purposes to attempts.

Coherence in the narration is achieved by applying naive theories of psychological and physical causation, reflecting knowledge about goal plans of action. The narration's content and structure are organised according to a hierarchical set of goals and a sustained plan of action. Unexpected obstacles and failures of goal attainment lead to the reinstatement of goals in order to continue following the plan. Although comprehension of this structure is attained by age 4, coherence begins to manifest itself most explicitly in the narrations of the 5-year-olds.