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TR 271

**Two Constraints on Speech Act Ambiguity**

*Hinkelman, E. A. and Allen J. F.*

April 1989, 30 pages, \$1.25

Existing plan-based theories of speech act interpretation do not account for the conventional aspect of speech acts. We use patterns of linguistic features (e.g., mood, verb form, sentence adverbials, thematic roles) to suggest a range of speech act interpretations for the utterance. These are filtered using plan-based conversational implicatures to eliminate inappropriate ones. Extended plan reasoning is available but not necessary for familiar forms. Taking speech act ambiguity seriously, with these two constraints, explains how *Can you pass the salt?* is a typical indirect request while *Are you able to pass the salt?* is not.

TR 288

**Linguistic and Pragmatic Constraints on Utterance Interpretation**

*Hinkelman, E. A.*

Ph.D. Thesis, May 1990, 159 pages, \$5.25

To model how people understand language, it becomes necessary to understand not only grammar and logic, but also how people use language to affect their environment. This area of study is known as natural language pragmatics. Speech acts, for instance, are the offers, promises, announcements, and so on that people make by talking. The same expression may be different acts in different contexts, and yet not every expression performs every act. We want to understand how people are able to recognize each other's intentions and implications in saying something. Previous plan-based theories of speech act interpretation do not account for the conventional aspect of speech acts. They can, however, be made sensitive to both linguistic and propositional information. This document presents a method of speech act interpretation that uses patterns of linguistic features (e.g., mood, verb form, sentence adverbials, thematic roles) to identify a range of speech act interpretations for the utterance. These are then filtered and elaborated by inferences about agents, goals, and plans. In many cases the plan reasoning consists of short, local inference chains (that are in fact conversational implicatures), and extended reasoning is necessary only for the most difficult cases. The method is able to accommodate a wide range of cases, from those that seem very idiomatic to those that must be analyzed using knowledge about the world and human behavior. It explains how *Can you pass the salt?* can be a request while *Are you able to pass the salt?* is not.

TR 298

**The RHET Plan Recognition System,  
Version 1.0**

*Miller, B. W.*

Jan. 1990, 50 pages, \$2.00

RPRS is a hierarchical plan recognition system built within the RHET knowledge representation system. It provides a powerful system for plan recognition based on the algorithms of Kautz with the general reasoning capabilities of RHET. RPRS takes special advantage of RHET's type relations, constraints, equality and contextual reasoning abilities. It is also intended as a demonstration of the RHET programming and knowledge representation systems hybrid reasoning capabilities. Utilizing the Lisp interface to Rhet, RPRS allows the user to use the Rhet-structured-type system to build plan types, and given some observation or set of observations have RHET derive the set of plans that are consistent with these observations. Since RPRS includes the TEMPOS specialized reasoner for RHET, steps and observations can have reference to time intervals, and/or be temporally constrained with respect to one another.

TR 317

**The Discourse System Project**

*Allen, J. F., Guez, S., Hoebel, L. J.,  
Hinkelman, E. A., Jackson, K. J., Kyburg,  
A. I., and Traum, D. R.*

Nov. 1989, 82 pages, \$3.25

There has been significant work in the last decade on the processing of discourse for modeling two-person extended dialogues, story and text understanding, and extended question answering systems. While there has been important progress in the use of world knowledge in language interpretation, the use of plan-based models of language (e.g., speech act planning), models of reference and focus, and models of discourse structure itself, work in each area has not been related to work in the other areas. No one has determined how individual processing techniques can be combined to form a fully functional discourse system. Some suggestions on the organization of discourse have arisen recently, and while showing promise, have not been explored in enough detail for an actual application. This report describes an architecture for discourse systems that allows the integration of many different processing modules. It also describes an initial set of modules that have been implemented and tested using the architecture.

TR 324

**ARMTRAK: A Domain for the Unified  
Study of Natural Language, Planning, and  
Active Vision**

*Martin, N. G., Allen, J. F., and Brown, C. M.*

Jan. 1990, 43 pages, \$2.00

ARMTRAK is a micro-world, based on the control of model trains, designed to integrate work in natural language, planning, vision, and robotics. The primary advantage of the domain is that it provides examples that involve few objects but require sophisticated analysis. Because they involve few objects, the complex reasoning required is not intractable. On the other hand, more objects can be introduced to study techniques for tractable reasoning. Simple and complex examples in the same domain allow work at different levels to take place simultaneously. As a planning domain, ARMTRAK allows exercising planners in a real-time domain about which the planner has only imperfect knowledge. As a domain for natural language research, it allows research into the grounding of language in real situations and the problem of coordinating the behavior of agents through language. As a domain for active vision research, it is challenging because it requires extracting information whose parameters cannot be completely specified beforehand. Two implementations of ARMTRAK have been developed: a simulation and a version using the Rochester Robot. The simulation allows work on real-time planning, and a robot version shows the feasibility of a real working system based on model trains.

TR 345

**An Episodic Knowledge Representation for  
Narrative Texts**

*Schubert, L. K. and Hwang, C. H.*

May 1990, 53 pages, \$2.25

We would like to build story understanding systems that are transparent, modular, and extensible. To this end, we have been working on a new logical approach to narrative understanding that features a GPSG-style grammar and an episodic logic with probabilistic inference rules. The grammar represents phrase structure and the relationship between phrase structure and logical form in a modular, explicit form. The

logical representation allows propositional attitudes, unreliable generalizations, and other nonstandard constructs, providing a uniform, transparent knowledge representation for both the explicit content of stories and for the background knowledge needed to understand them. It makes systematic use of episodic variables in the representation of episodic sentences, using these to capture temporal and causal relationships. The rules of inference include probabilistic versions of deduction rules resembling forward and backward chaining rules in expert systems. These can be used for predictive, explanatory, and simulative inference. We illustrate our approach with nontrivial grammar fragments (including semantic rules), and with an extended example of forward-chaining inference based on a sentence from Little Red Riding Hood. A pilot implementation is able to make many (though not all) of the inferences we describe.

TR 346  
**Semantic Nets Are in the Eye of the Beholder**

*Schubert, L. K.*

May 1990, 13 pages, \$1.00

The term semantic nets, in its broadest sense, has become virtually meaningless. It is applied to systems that, as a class, lack distinctive representational and computational properties vis-à-vis other knowledge representation (KR) schemes. This terminological problem is not due to lack of substance or coherence of work done under the semantic net banner. Rather, it is due to convergence of the major KR schemes: the representational and computational strategies employed in semantic net systems are abstractly equivalent to those employed in virtually all state-of-the-art systems incorporating a substantial propositional knowledge base, whether they are described as logic-based, frame-based, rule-based, or something else. In particular, I will argue that using a graph-theoretic propositional representation does not automatically distinguish it from others: even sets of PC formulas, abstractly viewed, are graphs. Nor is proximity-based inference (using graph-theoretic distance) automatically distinctive, since even resolution strategies (with reasonable indexing schemes) are proximity-based in the abstract; nor its hierarchic property inheritance any longer distinctive, given its availability in state-of-the-art logic-based, frame-based, and rule-based systems. So I urge some more restrictive, and hence more meaningful use of the term semantic nets than is the current practice.

The following new papers are available on request from:

The Technical Report Librarian Centre for Cognitive Science

University of Edinburgh

2 Buccleuch Place

Edinburgh EH8 9LW Scotland, UK

EUCCS/RP-26  
**Grammar Frameworks**

*Klein, Ewan*

December 1988, 45 pages, \$1.50

This paper provides a brief overview of the main developments in recent work on grammatical frameworks, covering transformational, "monostratal," lexicalist, and unification-based approaches. Among the topics touched on are syntax-semantics interaction, the interpretation of grammar formalisms, the lexicon, grammar and computation, and some prospects for future research in the area. An extensive bibliography is provided.

EUCCS/RP-27  
**Autonomy, Implementation and Cognitive Architecture: A Reply to Fodor and Pylyshyn**

*Chater, Nick and Oaksford, Mike*

April 1989, 20 pages, 75¢

Fodor and Pylyshyn (1988) claim that the current inability of connectionism to deal with structured representations makes it inappropriate as a theory of cognitive architecture. This poses an important challenge to the new technology. That many connectionists are attempting to address this issue suggests that a commitment to the need for structured representation does not separate connectionist and

classicist as Fodor and Pylyshyn claim. We identify the issue of computational and explanatory autonomy of cognitive and implementational levels as the substantive dispute between connectionist and classicist. This diagnosis is born out in Fodor and Pylyshyn's discussion of the "lures" of connectionism which are typically taken to challenge the classicist position. Fodor and Pylyshyn believe that the lures are, in principle, quite compatible with the classicist autonomy assumption. However, we argue in detail that the classicist has yet to adequately meet this challenge, in practice. Moreover, we adduce arguments concerning the nature of nondemonstrative inference, especially default reasoning, which strongly suggest that the classicist's task is impossible, in principle.

**EUCCS/RP-28**  
**Choosing Computational Architectures for Text Processing**  
*Stenning, Keith and Oaksford, Mike*  
 April 1989, 36 pages, \$1.75

In this paper we investigate various criteria that bear on the choice of computational architectures for text processing. The principle role of the computational or cognitive architecture is to provide mechanisms for inference. In the study of text processing two forms of inference are fundamental, (i) the implicit elaborative inferences required for interpretation and (ii) explicit inferences that can be the subject of a text. We suggest that the decision of what architecture to employ in accounting for these inferential modes cannot be made a priori. We argue that classical cognitive architectures based on logic and proof theory although eminently suited to (ii) fail to provide tractable theories of (i), while more recent proposals like PDP (Rumelhart and McClelland, 1986) and classifier systems (Holland, Holyoak, Nisbett and Thagard, 1986), seem to offer new insights into (i) while leaving (ii) untouched. We examine the computational issues involved in a review of recent candidate architectures beginning at one extreme with Prolog, going through ACT and Classifier systems, ending with PDP. We then examine the empirical work from verbal reasoning tasks involving conditional and syllogistic reasoning in arguing that the grounds upon which to choose between architectures are largely a posteriori and empirical and moreover indicate that satisfactory explanations of this data must invoke both (i) and (ii). In the process we shall proffer novel interpretations both of conditional reasoning experiments as being largely inductive (and hence of scant relevance to assessing our facility for logical thought) and of Johnson-Laird's theory of syllogisms as providing a heuristic theorem prover along the lines of any other practical implementation of logic. We believe that this allows the explanatory burden for a lot of this data to be correctly located at the implementation rather than the cognitive level.

**EUCCS/RP-29**  
**Connectionism, Classical Cognitive Science and Experimental Psychology**  
*Oaksford, Mike, Chater, Nick, and Stenning, Keith*  
 April 1989, 22 pages, 75¢

Classical symbolic computational models of cognition are at variance with the empirical findings in the cognitive psychology of memory and inference. Standard symbolic computers are well suited to remembering arbitrary lists of symbols and performing logical inferences. In contrast, human performance on such tasks is extremely limited. Standard models do not easily capture content-addressable memory or context-sensitive defeasible inference, which are natural and effortless for people. We argue that connectionism provides a more natural framework in which to model human cognition. In addition to capturing the gross human performance profile, connectionist systems seem well suited to accounting for the systematic patterns of errors observed in the human data. We take these arguments to counter Fodor and Pylyshyn's (1988) recent claim that connectionism is in principle irrelevant to psychology.

EUCCS/RP-30  
**A Note on Multiple VP Ellipsis**  
*Klein, Ewan and Stainton-Ellis, Kate*  
 April 1989, 7 pages, 50¢

This squib draws attention to the phenomenon of multiple VP ellipsis, as illustrated in the following example:

“If you work hard, make the right choices and keep your nose clean, you get ahead. If you don’t, you don’t.”

We present a taxonomy of such data, pointing out that they are somewhat less rare than one might have expected. We also suggest, as a consequence, that the resolution problem for ellipsed VPs is potentially as complex as that required for nominal anaphora.

EUCCS/RP-31  
**Devlin on Information and Cognition**  
*Seligman, Jerry and Chater, Nick*  
 May 1989, 16 pages, 75¢

Dretske (1981) and Barwise and Perry (1983) both aim to provide a naturalized theory of meaning and information. In his new book, *Logic and Information*, Keith Devlin hints at various connections between the two. In particular, he suggests that the individuation of the primitives of situation theory—objects, locations and relations—can be explained using Dretske’s distinction between information carried in analog and digital form. Since situation theory claims to be a general theory of information, it should be able to express Dretske’s distinction. This raises the possibility of situation theory being able to explain the individuation of its own primitives. We conclude that if the ontological burden is to be shifted, then the situation theoretic notion of constraint, rather than that of object and relation, must take the weight. In the second half of the paper, we examine more thoroughly the claim the analog/digital distinction is sufficient to capture the process by which an agent individuates the world into categories suitable for cognitive activity. We note that Dretske’s account of the distinction between cognitive and noncognitive activity is relative to a number of factors that must be captured by an adequate situation theoretic treatment.

EUCCS/RP-32  
**Intensionality, Boundedness, and Modal Logic**  
*Morrill, Glyn*  
 May 1989, 16 pages, 75¢

In order to characterize facts about locality, the study of syntax has led to the hypothesis of boundaries and bounded domains. But from the point of view of semantics, domains already exist in the form of intensional domains. The question arises as to whether intensionality, a necessary feature of semantic theory, in fact also provides appropriate terms of reference for syntactic description.

The paper presents the associative Lambek calculus and observes that while this provides a characterization of discontinuity phenomena, it fails to capture the idea of locality, e.g. it does not distinguish between relativization, which is unbounded, and reflexivization, which is bounded. We present an intensionalisation of the Lambek calculus, and show that this provides a handle in terms of which the boundedness of reflexivization can be expressed. It is then further argued that while the combinatorics of the Lambek calculus correspond to implicational linear logic, the intensionalised calculus corresponds to a modal logic, i.e., the logical character of intensional types is the logic of necessity.

EUCCS/RP-33  
**Partiality and Coherence in Concept Combination**  
*Myers, Terry, Franks, Bradley, and Braisby, Nick*  
 March 1989. 19 pages, 75¢

This paper explores the possibility for accounts of the semantic content of lexical entries to respect current arguments concerning coherence. We begin by outlining the tension that exists between the twin requirements on meaning, specificity, and flexibility. Then we consider the positions that we believe are characterized by Clark’s (1983) description, “sense selection.” In considering coherence in sense selection approaches, we rely heavily on Murphy and Medin’s (1985) arguments. We claim that their arguments in favor of a theory determined account of coherence lead to the rejection of the sense selection view. We then outline our own position, one we call sense generation. We argue that specificity and

flexibility suggest that lexical concepts must be treated as quite specific, yet partial objects. Such lexical concepts may be extended, that is, features may be added or denied, relative to constraints provided by local theories. Such a position divorces coherence from issues of metaphysics and allows for the suggestion that the process of "using words to mean" is intrinsically perspectival. Following on from this general outline, we briefly discuss two views consonant with this position: Braisby (1989) and Franks (1989). We illustrate these by considering examples of concept combination, such as "stone lion," "attractive dancer," and "adoptive mother."

**EUCCS/RP-34**  
**Grammar as Logic**  
*Morrill, Glyn*  
 July 1989, 16 pages, 75¢

The notion of "parsing as deduction" appears to presuppose that of "grammar as logic," though in fact the former has largely involved embedding grammars in logics using a fragment conducive to theorem-proving. It is well known that categorial grammars take the form of implicational logics; in this case the grammar is not embedded, but simply is a logic. The paper argues that many further operations may be added to such a grammar, the result having close relations with linear logic. Thus categorial grammar emerges as the implicational fragment of a much more general logical grammar. A Prolog implementation illustrates applications to polymorphism, optionality, intensionality, bounded and unbounded extraction, and coordination reduction.

**EUCCS/RP-35**  
**How the Laws of Thought Lie**  
*Oberlander, Jon*  
 July 1989, 27 pages, \$1.00

The paper explores the relevance for knowledge representation of Nancy Cartwright's views on the organization of scientific theories. Correspondences between different types of scientific laws and KR's default rules are established, focusing on a distinction between phenomenal and fundamental laws. The tradeoff between truthfulness and usefulness present in scientific laws allows a new perspective on the KR tradeoff, and differing types of explanation in science carry over into KR. The crucial role of approximation in scientific inference suggests a specific type of knowledge organization, based on the notion of simulacra.

**EUCCS/RP-36**  
**Processing Extractions without Gaps**  
*Pickering, Martin and Barry, Guy*  
 September 1989, 20 pages, 50¢

Most psycholinguistic theories have traditionally made use of the transformational grammar notions of filler and gap in explaining the processing of constructions involving extraction. On the assumption that recursive nesting of dependencies must ultimately cause processing difficulty, we show that standard analyses using gaps make incorrect predictions for a class of sentences involving pied-piping (and that alternative analyses using gaps are deficient in other respects). From this we argue that the processor establishes dependency relations between filler and subcategorizer rather than between filler and gap, and demonstrate that the use of a theory of syntax without gaps, such as a flexible categorial grammar, yields a more appropriate processing model. We show how this approach can be used to describe the processing of center-embedded constructions, and integrated with experimental results on long-distance dependencies.

**EUCCS/RP-37**  
**Generating Recipes: An Overview of Epicure**  
*Dale, Robert*  
 November 1989, 26 pages, \$1.00

This paper describes the overall architecture and operation of Epicure, a natural language generation system that embodies the view that a discourse can be generated on the basis of a plan, and expanded to a level of detail commensurate with the knowledge of the hearer, resulting in the generation of a structured discourse. The paper shows how the

various components that make up the system contribute to the achievement of this goal.

**EUCCS/RP-38**  
**Prosodic Morphology and**  
**Constraint-Based Phonology**  
*Bird, Steven*  
 June 1990, 28 pages, \$1.00

Unification-based grammar formalisms have been employed in the analysis of a vast range of syntactic and semantic phenomena. Applications to morphological and phonological domains have proceeded at a slower pace, largely because they have taken phonological representation to be linear. This is in stark contrast with the developments in the phonology literature over at least the last decade, where many have proposed the adoption of multilinear (or nonlinear) representations. The chief purpose of this paper is to reconcile this difference, by showing how complex hierarchical phonological structures may be represented using the descriptive vocabulary of a unification-based grammar formalism. A complementary goal is to advocate the use of computationally interpretable theories of phonology, because of the increased theoretical and empirical rigor such a shift will bring to the domain.

A unification-based approach (formalized in a decidable subset of classical first-order logic) is used in the representation of prosodic structure, where syllables are composed of moras which in turn are composed of Browman and Goldstein's (1989) articulatory gestures. Two devices, namely re-entrancy and sequencing, are employed for the representation of geminates and affricates. The main exemplification is taken from the verb paradigm of Cairene Arabic. The appendix contains an outline of (i) a feature logic for phonological description, (ii) the translation of the Arabic analysis into the logical language and (iii) a working implementation.

**EUCCS/RP-39**  
**Sense Generation or How to Make the**  
**Mental Lexicon Flexible**  
*Franks, Bradley and Braisby, Nick*  
 June 1990, 12 pages, 50¢

In this paper we address some key issues in the psychology of word meaning, and thereby motivate a sense generation approach to the diversity of senses that a word may have. We note that an adequate account must allow for the flexibility and specificity of senses, and must also make appropriate distinctions between default and nondefault senses of a word, and between different senses for vague, and ambiguous words. We then discuss two central components of a theory of sense. First, lexicons, the stable representations, in a "mental lexicon" of word meanings; second, senses, the mentally represented descriptions associated with particular uses of words. We argue that the crucial issues in accounting for the diversity of sense are: the number of lexicons we need to postulate, and the relationship between the contents of those lexicons and their associated senses. Sense selection accounts, of which we distinguish strong and weak versions, both of which find considerable support in the cognitive science literature, fail to account for the flexibility and specificity of senses in a way that is consonant with linguistic evidence regarding the ambiguity of words, and psychological evidence regarding the coherence which underlies their use. We will show how the sense generation approach, by positing a nonmonotonic relationship between lexicons and their senses, respects these considerations. We sketch this approach, and finally note some of its promising implications for other aspects of word meaning.

**EUCCS/RP-40**  
**Nominal Tense Logic**  
*Blackburn, Patrick*  
 June 1990, 18 pages, 65¢

*Nominal Tense Logic* is an extension of ordinary tense logic in which reference to times is possible. The mechanism used to achieve this is to introduce a second sort of propositional variable—the nominal—constrained to be true at exactly one time in any interpretation. The paper discusses the increase in expressive power thus

gained (conditions such as irreflexivity and discreteness become tense logically definable), presents a number of completeness and decidability results for temporally interesting classes of frames, and briefly discusses the import of such sorted intensional languages for natural language semantics.

**EUCCS/RP-41**  
**Multiple PP Gaps**  
*Tait, Mary*  
February 1990, 25 pages, 90¢

In this paper I will show that PP double dependencies exhibit rather different behavior than do NP dependencies. By double dependency I refer to syntactic phenomena involving a PP filler with two dependent gaps. I will deal, primarily, with the double dependency construction of parasitic gaps, and will argue first, that there are no grammatical instances of a PP filler with two PP gaps; secondly, I will argue that there are grammatical instances of a PP filler with a PP licensed gap and an NP parasitic gap, thus demonstrating the existence of something "sloppy" about filler-gap relations. I will mention, briefly, the double dependency construction of coordination and will suggest that here, unlike in parasitic gap phenomena, PP double dependencies do occur, but show a marked awkwardness in the case of extracted complements as opposed to adjuncts. I will also briefly touch on PP dependencies in headless relatives. In conclusion, I will sketch a parsing explanation for these phenomena but will offer no syntactic solution to account for the data.

**EUCCS/RP-42**  
**Specifiers, Complements and Adjuncts in HPSG**  
*Cooper, Richard*  
July 1990, 25 pages, 90¢

The paper consists of a presentation and exploration of a number of modifications to the basic framework of HPSG as presented in Pollard and Sag (1987). Three independent modifications are considered: the separation of subjects and other complements as argued for in Borsley (1987); the use of sets rather than lists to represent subcategorization requirements (along with the introduction of grammatical functions to distinguish complements); and the selection by adjuncts for the heads they modify.

**EUCCS/WP-4**  
**Papers from the 1989 Edinburgh Round Table on the Mental Lexicon**  
*Dunbar, George, Franks, Bradley, and Myers, Terry (eds.)*  
June 1989, 147 pages, \$6.00

The "1989 Edinburgh Round Table on the Mental Lexicon" brought together participants from the U.K., Europe, and Israel. This volume collects together papers based on many of the participants' contributions. The papers emphasize interdisciplinary responses to problems regarding the syntax and semantics of words, and their mental representation. As a result, the papers reflect concerns in descriptive and formal linguistics, in cognitive psychology, and in philosophical and logical semantics.

Terry Myers, Bradley Franks, Nick Braisby: "Partiality and Coherence in Concept Combination"  
George Dunbar: "Making Senses of Words"  
Ilse Karius: "Polysemy as an Instance of Lexical Regularity: Prepositions"  
Jim Miller: "Thematic Roles, Truth Conditions and Lexical-Conceptual Structure"  
James Hampton: "Attribute Inheritance under Negation"  
Renate Bartsch: "What is in the (Mental) Lexicon?"  
Bradley Franks: "Concept Combination: Towards an Account of Privatives"  
Nick Braisby: "Prototypes and Word Meaning"  
Benny Shanon: "Remarks on the Problem of Context"  
Nick Chater: "Conceptual Change, Innateness and Internal Representation"

## EUCCS/WP-5

**Studies in Categorical Grammar***Barry, Guy and Morrill, Glyn (eds.)*

May 1990, 148 pages, \$5.00

The papers collected together in this volume are representative of work on categorial grammar that has been carried out at the Centre for Cognitive Science over the past year. Much previous work at the Centre has investigated empirical arguments for a flexible notion of categorial constituency (cf. Volume 1 of this series); phenomena such as extraction, coordination, and incremental interpretation have motivated the addition of further combinatorial possibilities to basic categorial grammar. Such moves can be seen as leading to the logical framework that had already been presented by Joachim Lambek in 1958. This system, the Lambek calculus, forms the basis on which the current volume builds.

Glyn Morrill, Neil Leslie, Mark Hepple, Guy Barry: "Categorial Deductions and Structural Operations"

Guy Barry and Martin Pickering: "Dependency and Constituency in Categorical Grammar"

Mark Hepple: "Word Order and Obliqueness in Categorical Grammar"

Martin Emms: "Polymorphic Quantifiers"

Neil Leslie: "Contrasting Styles of Categorical Derivations"

Glyn Morrill: "Grammar and Logical Types"

## EUCCS/WP-6

**Parametric Variation in Germanic and Romance***Engdahl, Elisabet, Reape, Mike, Mellor, Martin, and Cooper, Richard (eds.)*

July 1990, 244 pages, \$7.50

The papers in this volume are the result of a workshop on Parametric Variation in Germanic and Romance that was held at Edinburgh University, September 24–26, 1989. The workshop was organized in connection with the ESPRIT Basic Research Action 3175 DYANA (Dynamic Interpretation of Natural Language).

Lars Ahrenberg: "Topological Fields and Word Order Constraints"

Josef Bayer and Jaklin Kornfilt: "Restructuring Effects in German"

John Beaven: "A Unification Based Treatment of Spanish Clitics"

Kathrin Cooper: "Zurich German *z* and Verb Raising Constructions"

Martin Everaert: "Case Theory and Binding Theory"

Gisbet Fanselow: "Constraints on Movement at S-Structure"

Mark Hepple: "Word Order and Obliqueness in Categorical Grammar"

Ian Roberts: "Inversion and Subject Clitics in Valdotain"

Antonio Sanfilippo: "Clitic Doubling and Dislocation in Italian: Towards a Parametric Account"

Ineke Schuurman: "Some Particular Verb-Raising Phenomena"

Mary Tait and Ronnie Cann: "On Empty Subjects"

Stephen Wechsler: "Verb Second and Illocutionary Force in Swedish"