Selected Papers from the 2006 Cyprus Syntaxfest

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Edited by

Kleanthes K. Grohmann and Phoevos Panagiotidis

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P U B L I S H I N G

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ACKNOWLEDGEMENTS

The *2006 Cyprus Syntaxfest* refers to two conferences that were held back to back in Nicosia: *Edges in Syntax* (15-17 May 2006) and *InterPhases* (18-20 May 2006). The first conference was held at Cyprus College and organized by Phoevos Panagiotidis, then a member of the academic staff there. Kleanthes Grohmann organized the second conference at the University of Cyprus, with several side events, such as the prestigious Leventis Lecture delivered by Prof. Noam Chomsky and an Honorary Doctorate ceremony for Prof. Chomsky. The conference itself was held at Casteliotissa Hall in the Old Town of Nicosia. The *Syntaxfest* was rounded off with a conference party at the first editor's house.

We would like to use this opportunity to thank Cyprus College (now the European University Cyprus) and the University of Cyprus (where the second editor is now a member of the academic staff) for making all this possible with generous financial and administrative support. Furthermore, we extend our thanks to all the student helpers that ensured a smooth organization of the event (before, during, and after). And of course, we thank all academic participants in the two conferences for stimulating presentations and for being a great interactive audience. We also thank the contributors to this volume for their work, their patience, and their cooperation.

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Kleanthes K. Grohmann & Phoevos Panagiotidis
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LIST OF ABBREVIATIONS

ΦP	Phi Phrase
ABIL	ability (marker)
ABL	ablative (case)
ACC	accusative (case)
ACD	antecedent-contained deletion
AdvP	Adverb Phrase
AP	Adjective Phrase
ARB	arbitrary
ASP	aspect
CL	clitic (chap. 11: classifier)
CLLD	clitic left dislocation
C	Complementizer
CG	Cypriot Greek
CP	Complementizer Phrase
CTM	copy theory of movement
D / Det	determiner
DAT	dative (case)
DEC	declarative (marker)
DEM	demonstrative
DP	Determiner Phrase
E	expressive
ec	empty category
ECM	Exceptional Case-Marking
EMPH	emphatic (marker)
EXPL	expletive
[F]	(formal) feature
FEM	feminine
[Fin]	(formal) finiteness-feature
FinP	Finiteness Phrase
[Foc]	(formal) focus-feature
FOC	focus (marker)
FocP	Focus Phrase
fP / FP	functional projection
FV	final vowel
GEN	genitive (case)
GER	gerund
HTLD	hanging topic left dislocation
[iFoc]	(formal) information focus-feature
IMP	imperative (marker)
IntP	Interrogative Phrase
IP	Inflection Phrase

L1	first language (acquisition)
L2	second language (acquisition)
LD	left dislocation
LF	Logical Form
MASC	masculine
ModP	Modifier Phrase
NEG	negative (marker)
NOM	nominative (case)
NP	Noun Phrase
NUM	numeral
NumP	Number Phrase
Op	operator
PF	Phonetic/Phonologial Form
PL	plural (marker)
PM	partial movement
Pred	predicate
PropP	Property Phrase
PRS	present tense (marker)
PRT	particle
PST	past tense (marker)
[Q]	(formal) question-feature
Q	question (marker / particle)
QP	Quantifier Phrase
QR	quantifier raising
REFL	reflexive (marker)
REL	relative (marker)
REP	repetitive (marker)
RP	resumptive pronoun
SA	speech act
SBJ	subjunctive
SG	singular (marker)
SMG	Standard Modern Greek
[SOP]	(formal) subject-of-predication feature
SP	simple past
Spec	specifier
SRefP	Speaker-Referential Phrase
T	Tense
t	trace
TOP	topic (marker)
TopP	Topic Phrase
TP	Tense Phrase
V2	verb second
*v*P	(light) Verb Phrase
VP	(lexical) Verb Phrase
[Wh]	(formal) *wh*-feature
WH	*wh*-phrase

LIST OF CONTRIBUTORS

Hee-Don Ahn
Konkuk University
Department of English
Seoul 143-701
Korea

e-mail: hdahn@konkuk.ac.kr

Ruixi Ressy Ai
Harvard University
Department of Linguistics
Boylston Hall, 3rd Floor
Cambridge, MA 02138

e-mail: ressy_ai@hotmail.com

Sungeun Cho
Yeungnam University
Department of English Education
214-1 Daedong Kyungsansi
Kyungsangbukdo, 712-749
Korea

e-mail: scho1007@ynu.ac.kr

Xuan Di
University of Tromsoe
CASTL
Box 134 CASTL
9037 Tromsoe
Norway

e-mail: xuan.di@hum.uit.no

Constantina Fotiou
University of Essex
Department of Language and
    Linguistics
Hawkins Quay H2/3/F
University Quays
Colchester CO2 8GY
United Kingdom

e-mail: cfotio@essex.ac.uk

Yukio Furukawa
McGill University
Dept. of Linguistics
1085 Dr. Penfield
Montreal, QC H3A1A7
Canada

e-mail: yfurukawa@tokai.or.jp

Kleanthes K. Grohmann
University of Cyprus
Department of English Studies
75 Kallipoleos
P.O. Box 20537
1678 Nicosia
Cyprus

e-mail: kleanthi@ucy.ac.cy

Rania Habib
Syracuse University
Department of Languages,
    Literatures, and Linguistics
325 H. B. Crouse
Syracuse, NY 13244
USA

e-mail: rhabib@syr.edu

Jeremy Hartman
Massachusetts Institute of
    Technology
Department of Linguistics and
    Philosophy
77 Massachusetts Ave.
Bldg. 32-D808
Cambridge, MA 02139
e-mail: hartmanj@mit.edu

Virginia Hill
University of New Brunswick &
    Concordia University
Department of Humanities and
    Languages
P.O. Box 5050
Saint John, NB E2L 4L5
Canada
e-mail: mota@unbsj.ca

Tabea Ihsane
University of Geneva
Department of Linguistics
2, rue de Candolle
1205 Geneva
Switzerland
e-mail: tabea.ihsane@unige.ch

Anna McNay
University of Oxford
Centre for Linguistics & Philology
Clarendon Press Institute
Walton Street
Oxford OX1 2HG
United Kingdom
e-mail: anna.mcnay@gmail.com

Sabine Mohr
Universität Stuttgart
Institut für Linguistik/Anglistik
Heilbronner Str. 7
70174 Stuttgart
Germany
e-mail: sabine@ifla.uni-stuttgart.de

Magda Oiry
University of Massachusetts,
    Amherst
Department of Linguistics
226 South College
150 Hicks Way
Amherst, MA 01003
USA
e-mail: magda.oiry@gmail.com

Phoevos Panagiotidis
University of Cyprus
Department of English Studies
75 Kallipoleos
P.O. Box 20537
1678 Nicosia
Cyprus
e-mail: phoevos@ucy.ac.cy

Tom Roeper
University of Massachusetts,
    Amherst
Department of Linguistics
226 South College
150 Hicks Way
Amherst, MA 01003
USA
e-mail: roeper@linguist.umass.edu

INTRODUCING THE CYPRUS SYNTAXFEST

Kleanthes K. Grohmann & Phoevos Panagiotidis

This volume brings together a selection of contributions that originated as presentations in the week-long *Cyprus Syntaxfest*. The Syntaxfest took place in the form of two conferences: *Edges in Syntax* (Cyprus College, 15-17 May 2006, organized by the second-named editor of this volume) and *InterPhases* (University of Cyprus, 18-20 May 2006, organized by the first), with a couple of hundred participants and remarkable overall appeal. The Syntaxfest brought together research in syntax by some of the most respected and prolific theoretical linguists from Europe, Asia, and the Americas. A total of almost 100 talks and posters were presented; given the sheer number of contributions, our intention as organizers, and joint editors of this volume, could therefore never have been to publish a comprehensive collection of conference proceedings.

However, when organizing the Syntaxfest we did not intend for it to serve as a generally-themed forum on syntactic theory and descriptive syntax, so it is far from accidental that the key topics of the two conferences comprising it thematically overlap. True, during the six days the Syntaxfest spanned over, work from a variety of viewpoints in modern generative grammar was presented, and the research discussed and debated over followed diverse methodological paths. And indeed, while a lot of the presentations revolved around foundational issues and matters pertaining to the architecture of grammar, in-depth discussion of typologically prominent or language-specific phenomena represented a good percentage of the cutting-edge, exciting, and insightful research aired in the two conferences.

As the titles of the two conferences indicate, the thematic focus was on (left) peripheries in linguistic structures and (their) interface interpretation. To wit, *Edges in Syntax* opened the floor examining the specifier-and-head edge of constituents in relation to their role in syntactic operations, including — but not limited to — edges as escape hatches for movement, issues of cyclicity, intervention/minimality effects, subject types, and so on. It also hosted work on the morphological realization of edge material and agreement, as well as on its LF interpretation: modification, tense, event and argument structure, topics, foci, specificity, definiteness,

discourse effects. Against this background, the question of phase edges was inevitably also raised and discussed variously.

Now, *InterPhases* focused exactly on derivational sub-parts such as, most prominently, phases (and their edges), as interpretive and articulatory units — as the chunks of syntactic structure shipped off to the semantic and phonological interfaces of the language faculty with the conceptual-intentional and the articulatory-perceptual systems in the mind/brain, respectively. The themes dealt with in *InterPhases* were expectedly informed by recent theoretical insights in how syntactic derivations are sent to the interfaces: not at Spell-Out, a 'singular point' in the derivation (possibly a notational remnant of the S-Structure of old), but once a 'critical mass' of structure is reached — *phases* in the work of Chomsky (2000 *et seq.*) or some other kind of sub-structure, such as *command units* (Uriagereka 1999) and *prolific domains* (Grohmann 2003), among other suggestions. Given that every time phases are transferred to the interfaces, the derivational workspace is wiped *almost* clean (this is, *grosso modo*, the idea behind the Phase Impenetrability Condition of Chomsky 2000, 2001), a number of crucial matters were examined on how exactly this Transfer operation takes place.

Because of the thematic unity as well as the inherent interest of so many contributions to *Edges in Syntax* and *InterPhases*, we decided to select a number of expanded and written-up versions of some of the research presented in the two conferences, and to bring it together in the volume you are reading right now. We believe that the present selection of papers reflects first of all the variety of approaches discussed during the Syntaxfest; it also provides a glimpse of the rich sample of cross-linguistic data that perplexed, enlightened, and drove us to theory-building (and theory-revising) during those six days.

In a nutshell, this volume brings together eleven studies on clausal (and nominal) left-peripheral phenomena and their (role in) interpretation in a variety of typologically unrelated languages. More significantly, the current collection of eleven research contributions underscores the by now established importance and theoretical interest of studying the edge of constituents, whether they be phasal or not. In every chapter, the familiar workings of a single, relatively simple 'syntactic engine' (to use Marantz's 1997 metaphor) surface in analysis after analysis for language after language. Furthermore, the blueprint of a general interpretive hierarchy driving and constraining syntax is also retraced throughout — among many others, see, for example, Belletti (2004) for cartographic approaches to this, and Grohmann (2003) or Hegarty (2005) for more domain-centred approaches.

Let us now look at the individual chapters in more detail.

The volume opens with the chapter by Magda OIRY & Tom ROEPER on the acquisition of the *wh*-system, one of the prototypical edge phenomena. "How Language Acquisition Reveals Minimalist Symmetry in the *Wh*-System" investigates the role of *wh*-expletives in language development and their correlation with scope-marking partial *wh*-movement. It argues that children's acquisition paths can go through UG options not attested in their input language, and that acquisition data actually fills a gap among UG-sanctioned possibilities for scope-marking: that of permitting a scope-marking *empty wh*-operator in *root* clauses. The authors make their case by analyzing acquisition data in which children treat the first *wh*-word in an embedded context as a scope-marker for the second *wh*-word. The authors then extrapolate that examples such as (1) and (2) involve the same strategy, albeit with an *empty* initial scope-marking operator:

(1)   You think what nut I am getting now?   (picking nut out of a tin)
(2)   You think where is Sophie?   (hiding under table)

Building on a generalization by Fanselow & Mahajan (2000), OIRY & ROEPER further argue that, if a language possesses an empty *wh*-operator for use with root clauses, it will also display partial *wh*-movement with embedded clauses. Given that the role of such operators is to mark scope, they subsequently invoke acquisition data to argue that, in a grammar possessing empty scope-marking operators in root clauses, *overt* scope-markers should be possible as well.

In chapter two, "Non-Case-Marked *Wh*-Phrases and Left Dislocation", Hee-Don AHN & Sungeun CHO look into an interesting class of subject–object asymmetries in Korean affecting *wh*-elements, thus highlighting the interaction of complementizer edge phenomena with the properties of subjects — another major area of interest in the research on edges and their interpretation. In Korean, objects — but not subjects — may drop their Case-marker when they occur in their canonical positions. However, non-Case-marked *wh*-subjects are possible in sentence-initial position only as long as they are D(iscourse)-linked (in the sense of Pesetsky 1987). Still, no such restriction holds for *in-situ wh*-objects, unless they are also moved into a sentence-initial position; again, the fronted *wh*-object can be bare only if D-linked.

AHN & CHO argue against a pseudo-incorporation account of the above facts and, following Ahn (1999), they propose to analyse bare (non-Case-marked) arguments as left-dislocated, which goes some way towards capturing their D-linked interpretation, à la Boeckx & Grohmann (2004).

Simultaneously, bare objects remaining *in situ* undergo complex predicate formation with their verbs, which explains the absence of D-linking effects with them. In a parallel fashion, left-dislocated objects are also bare — otherwise they would strand their Case-marker behind, something banned by a version of the Stray Affix Filter (Lasnik 1981). Based on the evidence, they finally claim that Korean, next to Hanging Topics, allows a version of Clitic Left Dislocation (CLLD), thus *two* of the "possible subtype[s] of Left Dislocation derivable from UG species".

In "A Focus Account of Swiping", Jeremy HARTMAN & Ruixi Ressy AI discuss the type of ellipsis called 'swiping' as an edge phenomenon. 'Swiping' is actually an acronym coined by Merchant (2002) which describes structures such as the ones bracketed in the examples below:

(3)   a.   John went to the movies, but I can't remember [who with].
      b.   A: She got a package in the mail.
           B: Really? [Who from]?

HARTMAN & AI develop an account according to which swiping should be analyzed as preposition stranding in a focus projection outside an elided IP: The entire PP moves to [Spec,FocP], the IP undergoes ellipsis, and then the *wh*-word moves to [Spec,CP], leaving the preposition behind in [Spec,FocP]. This account is compatible with peculiarities characterizing swiping: (i) the fact that prepositions in it must not have an antecedent, as they would not be foci; (ii) the fact that prepositions always receive stress (as foci); (iii) the requirement that the participating *wh*-expression must generally be a minimal *wh*-word, something linked to the incompatibility of focusing D-linked expressions such as *which low-fat cake*. Interestingly, their analysis can also capture the interaction of aggressively non-D-linked expressions, such as *what the hell*, with swiping, as well as cases of swiping *without* prepositions like the following:

(4)   A: Mary made $10,000 in one week.
      B: [What doing]?

Staying in the complementizer field and within focus investigations, the next chapter looks in detail into focus, and focusing in Cypriot Greek. The contribution "Focusing Strategies in Cypriot Greek" by Constantina FOTIOU does not primarily provide evidence for the existence and the workings of a clausal Focus Phrase, like the previous chapter, but attempts to shed light on different focus strategies by examining their function in Cypriot Greek. The focus system in this variety of Greek seems to make

available three strategies: focus clefting, focus *in situ*, and focus movement. This immediately raises issues of economy and, consequently, possible interpretive differences among the three strategies.

FOTIOU embarks upon the task of addressing the problem by using questionnaires to elicit native intuitions, and she reaches the following conclusions: First, clefting is the preferred strategy with contrastive focus, whereas the *in-situ* strategy is the preferred one with information focus. Second, focus movement, to the extent that it is fully available in Cypriot Greek mental grammars (on which Fotiou makes some interesting socio-linguistic remarks), is also preferred in contrastive environments. Actually, the general tendency emerging from the questionnaire study was to interpret contrastively the constituents appearing in high focus positions. Third, there is an interesting discussion of a seemingly marginal structure, in which a constituent inside a cleft structure undergoes further movement higher up, with this second operation bearing the characteristics of A'-movement. The chapter concludes with a case for all focus being contrastive, with only the size of the set over which it ranges differing in each case.

Further insights into the nature of focus in the complementizer field are expanded upon in Sabine MOHR's chapter on Verb Second (V2) in German, "V2 as a Single-Edge Phenomenon". Mohr applies Rizzi's (1997) 'split-CP' proposal to German in order to argue that sentence-initial XPs in German declarative V2 clauses can be located either in the specifier of TopP/FocP or in [Spec,FinP] — depending on whether they carry topic/focus features or not. The merit of the analysis lies in its ability to account for a range of data that previous approaches to V2 fail to capture, namely that not all instances of V2 in German sound natural: Whereas subjects, dative objects of passives, experiencers of impersonal psych-verbs, and certain temporal and locative adverbs can be fronted to the first position with 'neutral' stress and in out-of-the-blue contexts, *all* other kinds of constituents can precede the verb in the second position only if they are topicalized or if they receive (contrastive) focus.

MOHR argues that [Spec,FinP] is the 'neutral' position for all constituents fronted in V2, a 'subject-of-predication' position, and to serve as the initial landing site for all of them; further movement operations to [Spec,FocP] or to [Spec,TopP] affect those constituents with the respective features and interpretations. This solution successfully subsumes the main insight behind 'asymmetric' analyses for V2, namely why fronted 'neutral' subjects in V2 (usually) behave differently than most of the other constituents.

Rania HABIB studies the edge positions between C and T in Arabic. As

the chapter title "The Syntax of the Standard Arabic Particles *ʔan* and *ʔanna*" indicates, she provides accounts of the nature and position of two complementizer-like elements, *ʔan* and *ʔanna*, whose exact character and identity have been a matter of debate for some time.

HABIB, investigating in detail the functions and positions of these two elements, concludes that *ʔanna* is a bona fide complementizer that takes finite complements and assigns accusative to the subject, similar to English *for*, and not a T(ense)-element. For *ʔan* she puts forth the claim that it is a mood marker in the T-position, marking non-finiteness but being compatible with nominative — characteristics which bring it very close to mood elements like Greek *na*. In order to empirically support her claims, she utilizes tests employed in Stowell (1982) and Wurmbrand (2001), such as the behaviour of *ʔanna* in Exceptional Case-Marking (ECM) environments: Since ECM is only possible with CP-less infinitives, it is found to be compatible with *ʔan* (a mood marker) but not with *ʔanna* (a complementizer). The chapter winds into a detailed study of different CP-edge elements with respect to not just ECM, but also their interaction with negation and the Arabic infinitival marker *li-*.

"On a Conflict between Antecedent-Contained Deletion and the Copy Theory of Movement" by Yukio FURUKAWA looks into a puzzle regarding quantifier movement. This is illustrated by an example like the following:

(5)   John [likes every boy that Mary does <gap>]

Given that the gap is created by VP ellipsis, it would be interpreted as a VP identical to "likes every boy that Mary does <gap>". This of course contains a gap, which would be interpreted as a gap-including VP — leading to infinite regress. Now, at LF, after quantifier movement applies, the structure would look something like this:

(6)   John [every boy that Mary does <gap> [likes *t*]

If Quantifier Raising leaves a trace, a variable-type empty category (which was the received view until the early 1990s), then the problem of infinite regress is conveniently settled because the elided VP within the moved QP can now find a non-gap-containing antecedent VP that obeys the identity condition on ellipsis. However, under the current copy theory of movement, the situation is different because there still remains a silent copy of the QP containing a gapped relative in the object position of the matrix verb:

(7)   John [every boy that Mary does <gap> [likes ~~every boy that Mary does <gap>~~]

This is the problem of Antecedent-Contained Deletion (ACD). Furukawa first presents a detailed criticism of Fox's (2002) solution to the infinite regress problem, he then proposes to solve it by extending it to Heim's (1982) analysis of indefinites as variables bound via unselective binding. FURUKAWA combines this idea with the hypothesis that composition of D with NP happens late in syntax: Therefore it is NPs, not DP arguments, that merge with V — as has been variously proposed and as suggested by Generalized Quantifier Theory.

Anna MCNAY opens her chapter "Information Structural Recursion at the Phase Level" with the question of what we are to make of a split CP in Germanic languages with V2: There is only one position before the verb (standardly argued to have head-moved to C) after all. In this respect, she attacks the same problem as MOHR's chapter, albeit in a more general way. She posits a feature [Link] and a specific phase edge projection, LinkP. This projection, recurring at the edge of every phase, encodes aspects of information structure and fulfils clearly defined feature checking roles within this edge domain. In other words, she substantiates the correlation between phases' edges and interface interpretation in the form of a specific feature, [Link], and of its head recursively projecting on every phase edge.

Building on research by Vallduví (1993), she then argues that none of the traditional bipartite divisions of the sentence (theme–rheme, old/given–new, topic–comment, ground–focus) actually works. Recasting this criticism, she puts Vallduvi's ideas to work by utilising [Link]: She therefore proposes dividing the sentence into Focus and Ground, with Ground consisting of a link (the material in [Spec,LinkP]) and a tail. Finally, the LinkP undertakes different interpretive roles depending on which phase's edge it appears. Thus, in the sentence-initial position [Link] can be related to Rizzi's (2004) [+aboutness] feature, whereas in the *v*P-phase it correlates with Rizzi's [+d-linking]; at the edge of the DP-phase, [Link] gets the interpretation of [+partitive] — a matter germane to the chapter by IHSANE on DP edges (see below).

Virginia HILL's contribution is another exploration of the edge of the complementizer field, but this time in its discourse-related interpretive function. In her chapter "Pragmatic Markers as Syntactic Heads: A Case Study from Romanian", she establishes discourse-oriented particles like Romanian *hai* as Speech Act functional heads. Descriptively speaking, pragmatic markers of speech acts are encoded as discourse features in the

left periphery of the Romanian CP, merging above the Force (= C) Phrase. Such Speech Act heads are possible with indicative 'that'-clauses in root contexts, a fact shown to result from the impact of the pragmatic marker on the syntactic derivation, namely the marker's probing into the finite 'that'-clause.

Hill further argues that the Speech Act head is specified for a [V] feature clustered with a [speech act] feature, that it possesses selectional properties and that its different readings are correlated with the type of CP complement it selects (i.e., imperative vs. indicative 'that'-clauses).

"On the Edge of DP: Different Arguments, Different Edges" zooms into the relatively understudied area of nominal edges. In it, Tabea IHSANE investigates how a layered approach to the structure of the DP can capture facts about the interpretation of French indefinites. While the author follows a cartographic methodology, she justifies the various features and projections by tightly relating structure and interpretation in a fine-grained fashion. The chapter sets off from the empirical observation that argumental indefinite *un*-NPs and *du/des*-NPs in French may have three readings, and not two as customarily assumed: a referential, a quantificational, or a property-denoting reading.

These different readings are captured by IHSANE by taking the left periphery to be articulated into a Speaker Reference Phrase, a Quantifier Phrase, and a Property Phrase. Thus, superficially identical *un*-NPs and *du/des*-NPs result from different underlying structures involving movement of *un* and *du/des*. Quantifier scope interactions corroborate this analysis of the nominal left periphery, with the account arguing in favour of syntactic selection and not of selection in terms of semantic type. In a similar vein, the origin of *un* and *du/des* is traced inside the nominal inflectional domain, a nominal *Mittelfeld*, where features of [count], [quantity], and [number] are assigned a projection each, an analysis inspired by an overlapping with Borer (2005).

The final chapter of the volume, "Demonstratives, Numerals and Colour Terms in (Beijing) Mandarin", is by Xuan DI. Examining proximal demonstratives, colour terms, and numerals, DI makes a case for all parameters as choices in the lexicon. She conceives the complexity of lexical items as their derivational history, subscribing to Kayne's (2002) claim that UG imposes a maximum of one syntactic feature per syntactic head. The author argues that it is the complexity of lexical items that decides their syntactic distribution, against a primitive basic order or a fixed functional hierarchy; she further illustrates this point by looking at the relative distribution of the classifiers, numerals, and demonstratives.

This analysis is then applied to Mandarin colour terms, where a

bimorphemic colour word needs the support of a *de* element, while a mono-morphemic colour word can modify an NP directly. In line with the above analysis, DI posits that an ordered set of movement operations affecting the different types of colour terms is sufficient for deriving the different structures involving demonstratives, numerals, and colour adjectives.

We would like to open the floor now to the interesting contributions just summarized with the obvious proviso that this volume does not constitute the final word on the matters addressed here. This not only concerns the individual proposals (but we might be wrong), which we hope will generate further research activities, but also the overarching theme of the 'triple *i*' — interface interpretation investigations of clausal and nominal edge phenomena (and here we are most certainly *not* wrong!). Rather, this volume should be seen as a (hopefully worthy) contribution to this thematic complex, inspiring researchers young and old to revisit, revise, and refine the observations, ideas, and analyses presented here and elsewhere.

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CHAPTER ONE

HOW LANGUAGE ACQUISITION REVEALS
MINIMALIST SYMMETRY IN THE *WH*-SYSTEM

Magda Oiry & Tom Roeper

1. Introduction

Linguistic theory has sought elegance through economy, locality, and a simple theory of transformation (movement). A natural form of elegance — a part of what makes a grammar 'perfect', in Chomsky's terms — should be, we argue, *symmetry* in the operations that cross structural types.

Recent work by Chomsky (2008) has taken a logical step in the theory of locality: Full Transfer (see below) should occur at the phase level. The idea, in brief, is that strict locality should lead — in the ideal form — to semantic, syntactic, and phonological Transfer of information to a cognitive/productive component at each phase boundary, such as the traditional clause, or CP, level. This then achieves an optimal interface between grammar and other mental systems.

We suggest that the system of feature satisfaction seeks to fulfil the interface goal of Full Transfer. In brief, Chomsky (2008) introduces the concept as the logical fulfilment of the concept of a phase: Information is transferred to phonological, syntactic, and semantic interfaces (as we discuss below). Therefore it is the concept of Transfer, not the notion of feature satisfaction itself, that drives the system and has the primary explanatory power. It provides an explanation for why, as we will show, *wh*-scope-marking appears spontaneously in acquisition in single clauses and why partial movement (PM) — that is, the occurrence of a partially moved *wh*-phrase in CP2, licensed by a scope marker in CP1 (as in German, for example) — appears spontaneously where it is not found in the target grammar.

This chapter first argues that the child's acquisition path can go through UG options found in other languages. Then we introduce how acquisition theory can adopt modern notions of Phrase Transfer and how other grammars exhibit PM and empty or covert operators, following a generalization by Fanselow & Mahajan (2000); we present evidence from

a large corpus that supports the claim that empty operators correlate with PM in acquisition. Finally we show that acquisition data fills a logical UG possibility of a phonetically real empty operator in single clauses by examining how children respond to both *who bought what*-sentences and long-distance movement.

1.1.   Scope-Marking Expletives

What happens when a grammar fails to fulfil derivational requirements? Here UG must provide options or the system will fail. A classic example of such a solution is the projection of semantically 'empty' expletives in overt positions, such as *there are three boys*, where *boys* moves invisibly to the subject, causing verb agreement, and where the expletive satisfies the case requirement. Our focus, scope-marking *wh*-expletives in PM-constructions, is seen the same way in a number of languages (see below): They mark landing sites for invisible movement. Thus expletives in general have evolved as conceptually marginal, 'elsewhere' conditions. However, as is often the case, what at first seems to be a marginal rescue device may reflect deep properties of grammar.

We claim in this chapter that *wh*-expletive insertion should appear at the same point as Transfer occurs following the same logic, maintaining symmetry among constructions. If true, it follows that scope-marking expletives should be possible in single-clause constructions as well as long-distance constructions. In particular, for a child, it can be a simplifying default delivering an interpretation for a comprehension challenge when the sentence spoken is not in the child's production grammar, which we will now explain.

1.2.   The Acquisition Perspective on Linguistic Theory

How does acquisition reflect on fundamental properties of UG? Does it provide a unique avenue to UG? We argue here, what is implicit elsewhere, that, if the child cannot accommodate a sentence to his grammar, then the child will select from UG a 'default' to prevent the sentence from crashing. We argue that 'default' operations are reflections of *Initial State Options* that a child can use *without* any guiding input. In that sense, the term 'default' does not capture the important status of such operations well, and we prefer the term Initial State Options. We predict:

(1)   Initial State Options appear 'spontaneously' in the acquisition process.

This prediction applies particularly in *comprehension* contexts where a child must respond to whatever an adult says whether or not it has an obvious analysis in the current child grammar. These Initial State Options should be perfect reflections of principles of economy, which in turn respond to the demands of interfaces:

(2)   Initial State Options are direct indicators of the principles of interface economy. Initial State Options arise directly (i.e. 'spontaneously'), without specific input.

A consequence of this perspective is that children will pass through grammars that may reflect other non-target languages; see e.g. Roeper (1982, 1999, 2007), Yang (2000), Chomsky (2008). In an ideal system, such operations do not depend upon prior parametric decisions, but may require the identification of some lexical items (such as *wh*-words).

1.3.   *How Many Grammars Does UG Cover?*

It is sometimes asserted that the extent of UG is revealed by the variation found in natural language. However, upon reflection it is obvious that UG could easily extend to grammars that do not exist, or once existed. Whatever biologically defines the set of possible grammars might not happen to appear in the set of grammars we know or happen to have studied. Imagine if one continent were not yet discovered, like Australia, then all of the insights that derive from Warlpiri for UG would not only not be known, but they would be defined as outside of UG, hence UG might easily be designed so as to exclude them. Excluding possibilities that should not be excluded has the effect of unnecessarily clouding — or making suspect — deeper principles. If predictable options appear in acquisition, then they can rectify what look like arbitrary restrictions in UG

Suppose we imagine that studied grammars constitute 1/100th (to be rather arbitrary) of possible human grammars supplied by biology, then it is not just possible but probable that children will pass through grammars that have not been revealed in other grammars, but are within the bounds of UG. Furthermore, the acquisition process might make that eventuality more likely — for instance, the absence of some lexical knowledge might lead to briefly eliciting a grammar that happens not to have appeared among the existing grammars and which disappears when more lexical knowledge is obtained. We will argue that precisely this is the case.

2.   Transfer and the Place of Long-Distance Movement

Chomsky's (2008) notion of Transfer is the logical endpoint of a theory of locality:

(3)   [T]here are Transfer operations: one hands the SO already
       constructed to the phonological component, which maps it to the
       SM interface ("Spell-Out"); the other hands SO to the semantic
       component, which maps it to the C-I interface. Call these SOs
       phases. Thus SMT entails that computation of expressions must be
       restricted to a single cyclic/compositional process with phases. In
       the best case, the phases will be the same for both Transfer
       operations. To my knowledge, there is no compelling evidence to
       the contrary. Let us assume, then, that the best-case conclusion can
       be sustained. It is also natural to expect that along with Transfer, all
       other operations will also apply at the phase level […].

                                   (p. 9 of the 2005 MIT ms., note omitted)

    Why did this definition not emerge long ago? It was the implicit
direction of grammatical theory once the locality of cyclic *wh*-movement
became clear. However, Full Transfer is exactly what long-distance
movement avoids, a topic which has stood in the centre of research for
several decades. The Transfer Hypothesis reinforces the view that children
avoid long-distance cyclic constructions if there is an option that preserves
locality.[1]
    If children mis-project grammars, what is the engine of change that
shifts them to an adult grammar, particularly if their mis-projection fulfils
locality requirements? A classic view, which we support, is that the
addition of lexical features forces shifts in syntactic analysis. In particular,
deVilliers, deVilliers & Roeper (to appear) argue that the child must learn
exactly which verbs project indirect questions in order to move to the adult
grammar.

2.1.   *Transfer, Partial Movement, and Feature Attraction*

    We argue that Transfer arises in instances of adult PM:

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[1] Chomsky (2008) addresses the absence of articulation in adult English of *wh*-
words at the CP-phase boundary (clause) with this observation: "We leave open
the question of how, or whether, expression of the features on C relates to the CP-
internal syntax" (p. 10, fn. 26 of the 2005 MIT ms.).

(4) **Was$_i$** glaubt Hans **mit** **wem$_i$** Jakob jetzt t$_i$ spricht?
      what believes Hans with who Jakob now talk
      "With whom does Hans believe that Jakob is now talking?"

The scope marker *was* "what" in the higher clause is linked to the *wh*-phrase *mit wem* "with who(m)", in the lower clause. The expression *mit wem* occurs at the edge of the phase, where it has moved syntactically and been transferred to the phonology for pronunciation. The interpretation in terms of argument structure of the lower verb also occurs at this point.[2]

The last twenty years have seen a huge array of evidence on behalf of the claim that children spontaneously produce such sentences, which fits our claim. DeVilliers, Roeper & Vainikka (1990) found extensive evidence that children interpreted the medial *wh*-word as a contentful *wh*-expression and treated the initial one as a scope marker for both adjuncts and arguments:

(5) a.   How did he learn what to bake?   *adjunct-argument*
     b.   When did he learn how to bake?   *adjunct-adjunct*

In both instances, the medial-WH is answered (*what*, *how*, etc.) just in case there is another WH in the higher clause (*what*, *how*, etc.). That word then functions as a *wh*-expletive scope-marker because it adds no argument structure content to the interpretation (see also Crain & Thornton 1998, Weissenborn, deVilliers & Roeper 1995).

Thornton (1990) showed that the effect could be elicited. She found examples of PM in L1 children elicited production, and analysed on par with German, along McDaniel's (1989) lines. According to Thornton, English children questions involve a scope marker (*what*) in [Spec,CP1] (the higher clause) which licenses the real *wh*-phrase (*which animal*) partially moved to [Spec,CP2] (the lower clause).

(6)   *What* do you think *which animal* says "woof woof"?

(7)   *What* do you think *which Smurf* really has roller skates?

Other studies of L2 children learners of English showed that PM occurred with second language learners as well. Gutierrez' (2005) production data

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[2] See Rizzi (2006) for the development of the concept of 'criterial freezing' which suggests that children answer medial questions have the wrong criterion for the scope-discourse interpretation. Our proposal below can be seen as a proposal for *how that error occurs*.

are illustrated below in (8-9) (see also Schulz 2004).

(8)   ***What*** do you think ***which baby*** had eaten the cake?

(9)   ***What*** do you think ***who*** lived in the house?

The adult long-distance counterparts will be respectively:

(8')   Which animal do you think had eaten the cake?

(9')   Who do you think lived in the house ?

2.2.   Wh-*in-situ and Invisible Scope-Markers*

What happens in those languages which have *wh*-in-situ? Cheng & Rooryck (2000), based on Mathieu (1999), provide extensive arguments and evidence for the concept of an invisible scope marker, present in French and other languages, to account for *wh*-in-situ:

(10)   [$_{CP}$ **Op$_i$** [$_{IP}$ Jean   aime [$_{VP}$ t_i **quoi$_i$**]]]   (Mathieu 1999)
            Q$_i$ John likes   what
        "What does John like?"

They also suggest that the underspecified morpheme is defective because it is ambiguous between a *wh*-phrase and *yes/no*-marker.

Oiry & Demirdache (2006) and Oiry (2008) show that the effect occurs in child French as well for long-distance movement, even though, predictable under our view, it is not found in the adult grammar. It does still appear in long-distance in situ environments, attested as being part of many French adult grammars (see also Strik 2003 from the protocol of Jakubowicz 2003). Data from children elicited production are illustrated in (11):[3]

(11)   a.   Q tu   crois   **quoi** qui est caché   dans   l'sac?
                   you believe what C   is hidden in   the-bag
              "What do you believe/think is hidden in the bag?"

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[3] Examples (11a-b) are taken from Oiry (2002), (11c-d) from Strik (2003). Two notes on the data from Oiry. First, according to Oiry & Demirdache (2006) and Oiry (2008), (11a) is ambiguous between a direct and an indirect dependency analysis; see their paper for more details. Second, # in (11b) indicates a phonological pause.

b.   Tu   penses *quoi* # que #   Tinky Winky l'adore?
              you   think   *what*   C   Tinky Winky CL.loves
              "What do you believe/think Tinky Winky likes?"

c.   Tu   penses *quoi* que je lis?
              you   think   *what*   C   I read
              "What do you believe/think that I am reading?"

d.   Tu penses *qui qui* me   lit   des histoires ?
              you think *who* C° PR   read   the stories?
              "Who do you think read me stories?"

Moreover, Oiry & Demirdache (2006) find that overt/covert operators co-exist in the grammars of children (from Oiry 2002, 2008), as in (12a), and (12b) showing respectively covert and overt markers:

(12)   a.   **Q** Tu penses **où**   elle   est cachée,   l'assiette?
               Q you think   *where* she   is hidden,   the-plate
               "Where do you think the plate is hidden?"

        b.   Est-ce que tu   penses qu'est-ce qui est cache dans le lit?
               ESK[4]   you think what   is hidden in   the bed
               "What do you think is hidden in the bed?"

Note that the absence of an overt scope marker in (12a) is not so surprising, given that, as illustrated in (10), French adult grammar exhibits this kind of scope marker.

Abdulkarim & Roeper (2003) also show that the effect of a matrix occurs in English with *whether* at the comprehension level. Children are asked the question in (13), to which many answered "no". This can only be an answer to (14):

(13)   *Situation*
       [She did brake the bike, but she said that she did not brake it.]
       "Did she say <u>whether</u> she braked the bike?"

(14)   a.   whether she said whether she really broke the bike:
               as if the truth of the lower *whether* were to be what she said
        b.   what did she say about whether she broke her bike.

The other alternatives lead to a "yes" answer to the question in (13). If

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[4] ESK (*est-ce que*) is analyzed as a *yes/no*-scope marker in the French adult grammar — French children mis-analyze it as a potential licenser for the partially moved wh-phrase.

the child answers only the truth of the lower *whether*, then the answer is "yes", if child answers only upper say-whether, it is "yes" she did say something about whether she broke it Therefore they exhibit PM of whether to the medial CP, which gets a "yes" answer and covert movement over the verb "say" whether she told the truth, which is "no".

Yip & Matthews (2001) report covert movement in spontaneous speech with bilingual children acquiring Cantonese and English (children aged 4.01 and 5.03, respectively), as in (15a-b), and Wakabayachi & Okawara (2003) report it with children in Japanese learning English (15c):

(15) a.   You think what nut I am getting now? (picking nut out of a tin)
      b.   You think where is Sophie?   (hiding under table)
      c.   OP Do you know what is in the bag?

A covert scope marker checks the Wh-features of C^0 and marks the proposition as interrogative with scope over the matrix verb, *know* (it is arguable that the scope marker is overt if *do* itself can be analyzed as a scope-marker, but this perspective would require a full analysis of *do* in child grammar).

The options in child grammar are found in adult grammar cross-linguistically, such as Ancash Quechua, Bahasa Indonesia, and Kitharaka:

(16) *Ancash Quechua* (Cole & Hermon 1994)
      (Qam) kreinki ***imata*** Maria   munanqanta José   rantinanta?
       you   think   what   Marie   want   José   buy
      "What do you think Maria wants José to buy?"

(17) *Bahasa Indonesia* (Saddy 1991)
      Bill   tahu   ***siapa yang*** Tom   cintai?
      Bill   knows   who   FOC Tom   loves
      "Who does Bill know that Tom loves?"

(18) *Kitharaka* (Muriungi 2004)
      U-ri-thugania ati ***n-uu***   John a-ring-ir-e   *t*?
      2SG-T-think   that *FOC-who* John SP-beat-T-FV[5]
      "Who do you think that John beat?"

Fanselow & Mahajan (2000) and Fanselow (2006) then develop a far-

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[5] The abbreviations for morphemes used in (18) are as follows: 2SG = second person singular, T = tense, FOC = focus, SP = simple past, and FV = final vowel.