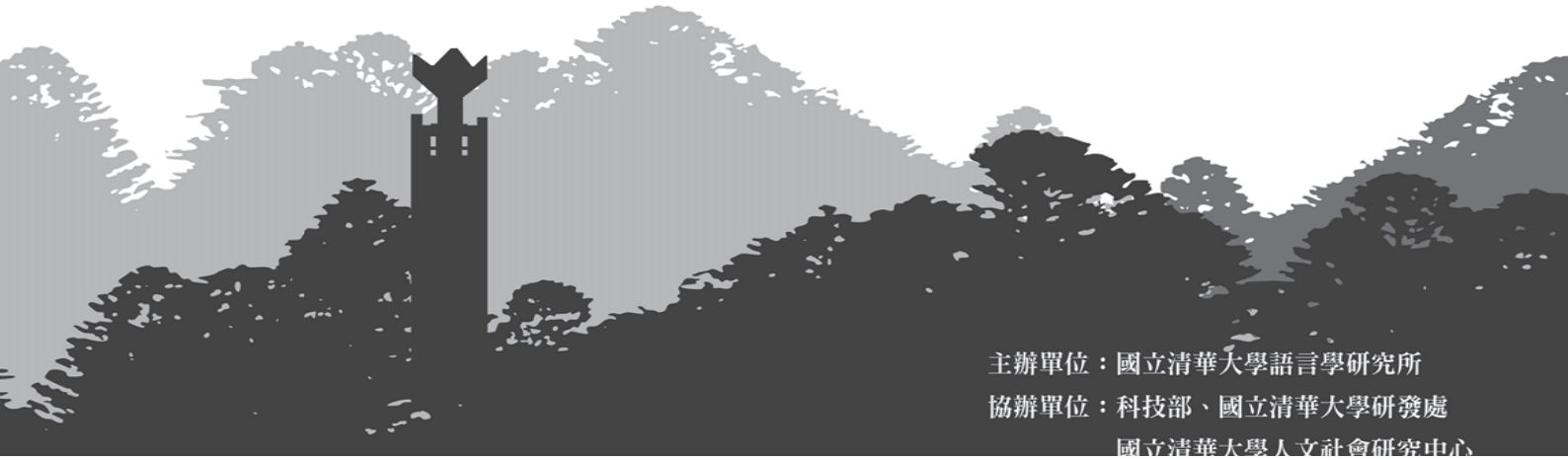
# GLOW in Asia X

第十屆
亞洲舊世界生成語言學會議

## May 24-26, 2014
## 2014年5月24-26日

**Room A202, HSS Building, National Tsing Hua University**
**國立清華大學人文社會學院A202室**



主辦單位：國立清華大學語言學研究所
協辦單位：科技部、國立清華大學研發處
國立清華大學人文社會研究中心

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# GLOW in Asia X

# 第十屆亞洲舊世界生成語言學會議

**May 24-26, 2014**

## The executive committee

| | |
|---|---|
| C.-T. James HUANG | Harvard University/Academia Sinica |
| K. A. JAYASEELAN | English and Foreign Languages University |
| Thomas Hun-tak LEE | The Chinese University of Hong Kong |
| Anoop K. MAHAJAN | University of California, Los Angeles |
| Mamoru SAITO | Nanzan University |
| Yuji TAKANO | Kinjo Gakuin University |
| Wei-tien Dylan TSAI | National Tsing Hua University |

## Local organizing committee

Honorary conference chair

| | |
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| Yueh-chin CHANG | National Tsing Hua University |

Conference chair

| | |
|---|---|
| Hui-chuan HSU | National Tsing Hua University |

Committee members

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| I-Ta Chris HSIEH | National Tsing Hua University |
| Hui-chuan J. HUANG | National Tsing Hua University/Academia Sinica |
| Wei-tien Dylan TSAI | National Tsing Hua University |

# Speaker List

**Opening**

| | |
|---|---|
| Keiko MURASUGI | Nanzan University |

**Keynote Speakers**

| | |
|---|---|
| C.-T. James HUANG | Harvard University<br>Academia Sinica |
| Richard S. KAYNE | New York University |
| Michael KENSTOWICZ | Massachusetts Institute of Technology |

**Panel on Syntactic Cartography in Comparative Perspective**

| | |
|---|---|
| Liliane HAEGAMAN | Ghent University |
| Hilda KOOPMAN | University of California, Los Angeles |

**Panel on the Syntax-Phonology Interface**

| | |
|---|---|
| Laura J. DOWNING | Göteborgs Universitet |
| Irene VOGEL | University of Delaware |

**Speakers and Authors**

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| Suyoung BAE | Dongguk University |
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| Michael BARRIE | Sogang University |
| Luosha BI | City University of Hong Kong |
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| | |
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| Ambalika GUHA | English and Foreign Languages University |
| Sona HAROUTYUNIAN | Università Ca' Foscari Venezia |
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| Semoon HOE | Seoul National University |
| Xuhui HU | University of Cambridge |
| Yusuke IMANISHI | Massachusetts Institute of Technology |
| | Kwansei Gakuin University |
| Yu IKEMOTO | Kinki University |
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| K. A. JAYASEELAN | English and Foreign Languages University |
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| Hisatsugu KITAHARA | Keio University |
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| Utpal LAHIRI | English and Foreign Languages University |
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| Seunghun LEE | Central Connecticut State University |
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| Hongyong LIU | South China Normal University |
| Chi-Ming Louis LIU | Harvard University |
| Na LIU | Tianjin Normal University |
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| Mioko MIYAMA | University of Tokyo |
| Hisashi MORITA | Aichi Prefectural University |
| Nobuaki NISHIOKA | Kyushu University |
| Toshiko ODA | Tokyo Keizai University |
| Hajime ONO | Tsuda College |
| Bum-Sik PARK | Dongguk University |
| J. Joseph PERRY | University of Cambridge |
| Ian ROBERTS | University of Cambridge |

| | |
|---|---|
| Yosuke SATO | National University of Singapore |
| T. Daniel SEELY | Eastern Michigan University |
| Saetbyol SEO | Seoul National University |
| Zheng SHEN | University of Connecticut |
| Yoshiyuki SHIBATA | University of Connecticut |
| Koji SHIMAMURA | University of Connecticut |
| Chih-hsiang SHU | Academia Sinica |
| Lan SUN | University of Science and Technology of China |
| Saurov SYED | University of Southern California |
| Takumi TAGAWA | University of Tsukuba |
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| Kensuke TAKITA | Mie University |
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| Lyn TIEU | École Normale Supérieure |
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| Hisao TOKIZAKI | Sapporo University |
| Satoshi TOMIOKA | University of Delaware |
| Seid TVICA | Universiteit van Amsterdam |
| Yuyun WANG | University of Southern California |
| Ting-Chi WEI | National Kaohsiung Normal University |
| Hideaki YAMASHITA | Yokohama City University |
| Barry C.-Y. YANG | National United University |
| Carryn YONG | University of Oxford |
| Riichi YOSHIMURA | Kyushu University |
| Haopeng YU | Henan Normal University |
| Hedde ZEIJLSTRA | Goerg-August-Universität Göttingen |
| Ya ZHAO | Northwest University for Nationalities |
| Peng ZHOU | Macquarie University |

# Chair List

| | |
|---|---|
| One-soon HER | National Chengchi University |
| Miao-Ling HSIEH | National Taiwan Normal University |
| I-Ta Chris HSIEH | National Tsing Hua University |
| Hui-chuan HSU | National Tsing Hua University |
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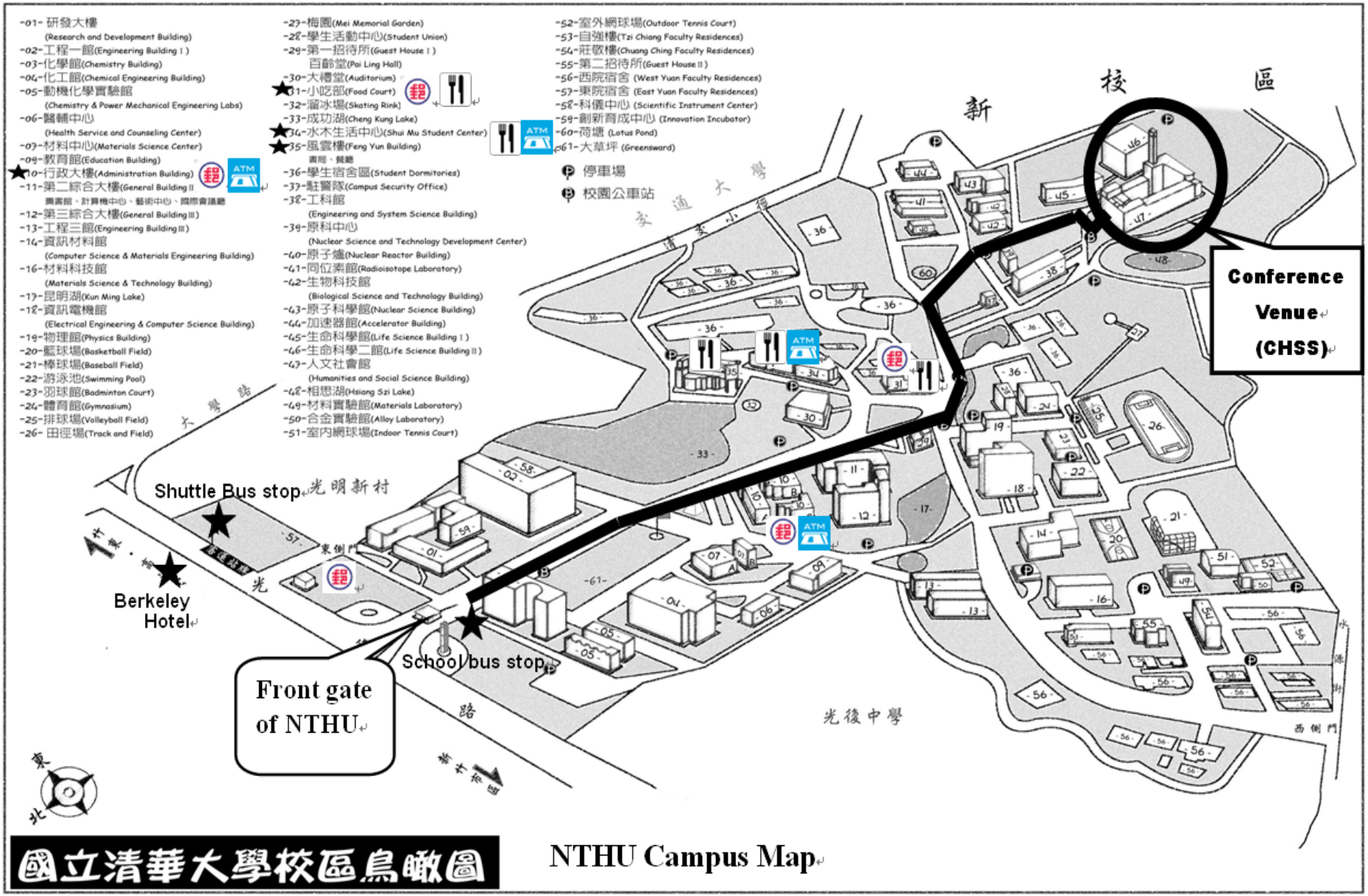
| Wei-tien Dylan TSAI | National Tsing Hua University |
| Niina ZHANG | National Chung Cheng University |


-01- 研發大樓 (Research and Development Building)
-02-工程一館(Engineering Building Ⅰ)
-03-化學館(Chemistry Building)
-04-化工館(Chemical Engineering Building)
-05-動機化學實驗館 (Chemistry & Power Mechanical Engineering Labs)
-06-醫輔中心 (Health Service and Counseling Center)
-07-材料中心(Materials Science Center)
-09-教育館(Education Building)
-10-行政大樓(Administration Building)
-11-第二綜合大樓(General Building Ⅱ) 圖書館、計算機中心、藝術中心、國際會議廳
-12-第三綜合大樓(General Building Ⅲ)
-13-工程三館(Engineering Building Ⅲ)
-14-資訊材料館 (Computer Science & Materials Engineering Building)
-16-材料科技館 (Materials Science & Technology Building)
-17-昆明湖(Kun Ming Lake)
-18-資訊電機館 (Electrical Engineering & Computer Science Building)
-19-物理館(Physics Building)
-20-籃球場(Basketball Field)
-21-棒球場(Baseball Field)
-22-游泳池(Swimming Pool)
-23-羽球館(Badminton Court)
-24-體育館(Gymnasium)
-25-排球場(Volleyball Field)
-26- 田徑場(Track and Field)
-27-梅園(Mei Memorial Garden)
-28-學生活動中心(Student Union)
-29-第一招待所(Guest House Ⅰ) 百齡堂(Pai Ling Hall)
-30-大禮堂(Auditorium)
-31-小吃部(Food Court)
-32-溜冰場(Skating Rink)
-33-成功湖(Cheng Kung Lake)
-34-水木生活中心(Shui Mu Student Center)
-35-風雲樓(Feng Yun Building) 書局、餐廳
-36-學生宿舍區(Student Dormitories)
-37-駐警隊(Campus Security Office)
-38-工科館 (Engineering and System Science Building)
-39-原科中心 (Nuclear Science and Technology Development Center)
-40-原子爐(Nuclear Reactor Building)
-41-同位素館(Radioisotope Laboratory)
-42-生物科技館 (Biological Science and Technology Building)
-43-原子科學館(Nuclear Science Building)
-44-加速器館(Accelerator Building)
-45-生命科學館(Life Science Building Ⅰ)
-46-生命科學二館(Life Science Building Ⅱ)
-47-人文社會館 (Humanities and Social Science Building)
-48-相思湖(Hsiang Szi Lake)
-49-材料實驗館(Materials Laboratory)
-50-合金實驗館(Alloy Laboratory)
-51-室內網球場(Indoor Tennis Court)
-52-室外網球場(Outdoor Tennis Court)
-53-自強樓(Tzi Chiang Faculty Residences)
-54-莊敬樓(Chuang Ching Faculty Residences)
-55-第二招待所(Guest House Ⅱ)
-56-西院宿舍 (West Yuan Faculty Residences)
-57-東院宿舍 (East Yuan Faculty Residences)
-58-科儀中心 (Scientific Instrument Center)
-59-創新育成中心 (Innovation Incubator)
-60-荷塘 (Lotus Pond)
-61-大草坪 (Greensward)
停車場
校園公車站
新校區
Conference Venue (CHSS)
Shuttle Bus stop
光明新村
Berkeley Hotel
School bus stop
Front gate of NTHU
光復中學
國立清華大學校區鳥瞰圖
NTHU Campus Map

# Notices

## 1. Presentation

**Oral presentations**:

Each oral presentation has been assigned a 45-minute slot, which will be timed by your session's chair. Please plan for a 30-minute presentation followed by 15 minutes of discussion. You will hear bell rings and see the corresponding cards to remind you of the passing time:

25 minutes: a card for "5 minutes left"
30 minutes: a short ring with a "stop" card and move on to the Q & A session
45 minutes: two short rings (time's up) and move on to the next talk

**Poster presentations:**

Posters are numbered (see program). Please mount your poster on a poster board with the correct poster number. Posters may be mounted at 10:00am. Don't forget to remove your poster at the end of the day!

**Facilities**:

The conference room is equipped with a PC laptop computer and a projector for Keynote/PowerPoint presentation. All presenters who plan to use the projector for their presentation are kindly asked to test their files prior to the session during a break. Please ask a member of staff for assistance.

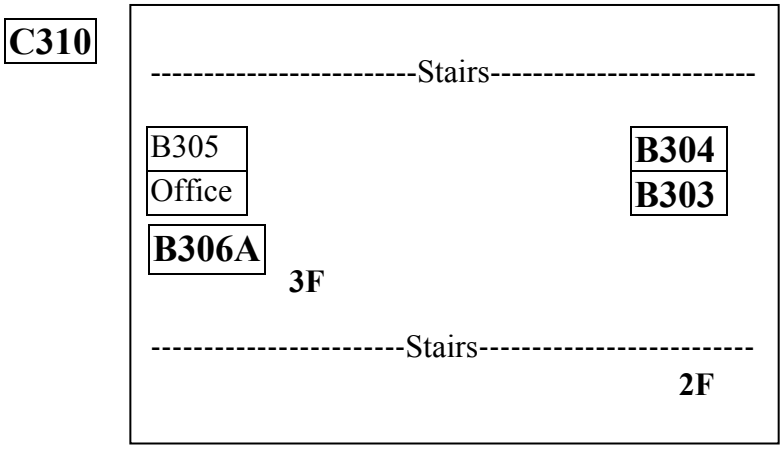
## 2. WiFi

WiFi service will be available around the headquarter of the Linguistics institute (Rooms B305, 306, HSS Building). Network name: nthu-ling; Password: 09876.

iTaiwan: You may also use our nation-wide free WiFi service: http://itaiwan.gov.tw/en/ on-and-off campus. NB: iTaiwan is not available in the HSS Building, the conference venue, though.

## 3. Lunch

Lunch boxes are provided for all registered participants. Please have your lunch at Rooms B303, B304, B306A, and C310.



## 4. Banquet

The conference banquet will be held at Garden.V restaurant (菜園餐廳), 19:00-21:00, May 25, 2014. The shuttle bus will be leaving for Garden.V restaurant in front of the HSS Building at 18:30. Please be advised to bring your invitation card with you.

## 5. Shuttle bus

There will be shuttle buses picking up conference attenders from the hotels below to the conference venue (HSS Building, NTHU) every morning. But notice that there will be NO shuttle bound for Berkely Hotel (Science Park).

**Bound for Conference venue (HSS Building, NTHU)**

5/24-26 8:00 (Berkerly Hotel) → 8:15 (Main gate of NTHU) → Conference venue
8:00 (Lakeshore Hotel) → Conference venue

**Bound for Lakeshore Hotel (Metropolis)**

5/26 18:30 (Conference venue) → Lakeshore Hotel (Metropolis)

## 6. Campus shuttle bus (Weekdays)

You may take free campus shuttle to HSS Building, too. The route is as follows: Chemistry Building/Main gate → Casa de Socrates Café → Maple Path → College of Life Science (across the road from the conference venue: College of Humanities and Social Sciences) → TSMC Building → the South Gate (Destination).

**Timetable & Route chart**

校園公車(中巴)班次時間表

(學期日內每星期一至星期五行駛,寒暑假期間另行公告)

停靠站：校門口、蘇格貓底、楓林小徑、生科館、台積館。

| 校門口 | 蘇格貓底 | 楓林小徑 | 生科館(人社院) | 台積館 | 台積館時刻 | 校門口 | 蘇格貓底 | 楓林小徑 | 生科館(人社院) | 台積館 | 台積館時刻 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 07:25 | | | | | 07:32 | 13:40 | | | | | 13:47 |
| 07:40 | | | | | 07:47 | 13:50 | | | | | 13:57 |
| 07:45 | | | | | 07:52 | 14:00 | | | | | 14:07 |
| 07:50 | 本班次星期一至星期六行駛 | | | | 07:57 | 14:05 | | | | | 14:12 |
| 07:55 | | | | | 08:02 | 14:10 | | | | | 14:17 |
| 08:02 | | | | | 08:09 | 14:12 | | | | | 14:19 |
| 08:10 | | | | | 08:17 | 14:20 | | | | | 14:30 |
| 08:25 | | | | | 08:32 | 14:25 | | | | | 14:32 |
| 08:30 | | | | | 08:37 | 14:37 | | | | | 14:44 |
| 08:36 | | | | | 08:43 | 14:40 | | | | | 14:47 |
| 08:40 | | | | | 08:47 | 14:43 | | | | | 14:50 |
| 08:45 | | | | | 08:52 | 14:45 | | | | | 14:52 |
| 08:50 | | | | | 08:57 | 14:51 | | | | | 14:58 |
| 08:57 | | | | | 09:04 | 14:53 | | | | | 15:00 |
| 09:00 | 本班次星期一至星期六行駛 | | | | 09:07 | 14:54 | | | | | 15:01 |
| 09:05 | | | | | 09:12 | 14:55 | 14:55 | (校門口、蘇格貓底同時發車) | | | 15:02 |
| 09:12 | | | | | 09:19 | 15:05~15:35尖峰時段機動發車 校門口發車 | | | | | |
| 09:19 | | | | | 09:26 | | | | | | |
| 09:33 | | | | | 09:40 | | | | | | |
| 09:40 | | | | | 09:47 | | | | | | |
| 9:45~10:15尖峰時段機動發車 校門口發車 | | | | | | 15:45 | | | | | 15:52 |
| | | | | | | 16:02 | | | | | 16:09 |
| | | | | | | 16:16 | | | | | 16:23 |
| | | | | | | 16:35 | | | | | 16:42 |
| | | | | | | 16:53 | | | | | 17:00 |
| | | | | | | 17:00 | | | | | 17:07 |
| | | | | | | 17:07 | | | | | 17:14 |
| | | | | | | 17:14 | | | | | 17:21 |
| 10:25 | | | | | 10:32 | 17:27 | | | | | 17:34 |
| 10:27 | | | | | 10:34 | 17:30 | | | | | 17:37 |
| 10:39 | | | | | 10:46 | 17:55 | | | | | 18:02 |
| 10:53 | | | | | 11:00 | 18:00 | | | | | 18:07 |
| 11:07 | | | | | 11:14 | 18:15~18:30尖峰時段機動發車 校門口發車 | | | | | |
| 11:21 | | | | | 11:28 | | | | | | |
| 11:34 | | | | | 11:41 | 18:40 | | | | | 18:47 |
| 11:48 | | | | | 11:55 | 18:55 | | | | | 19:02 |
| 12:00~12:15尖峰時段機動發車 校門口發車 | | | | | | 19:10 | | | | | 19:17 |
| | | | | | | 19:25 | | | | | 19:32 |
| 12:28 | | | | | 12:35 | 19:40 | | | | | 19:47 |
| 12:41 | | | | | 12:48 | 20:05 | | | | | 20:12 |
| 12:48 | | | | | 12:55 | 20:20 | | | | | 20:27 |
| 13:02 | | | | | 13:09 | 20:35 | | | | | 20:42 |
| 13:07 | | | | | 13:14 | 20:50 | | | | | 20:57 |
| 13:10 | | | | | 13:17 | 21:10 | | | | | 21:17 |
| 13:17 | | | | | 13:24 | 21:25 | | | | | 21:32 |
| 13:26 | | | | | 13:33 | | | | 22:05 | | 22:00 |

# Program

**Saturday, May 24, 2014**
All talks are at Humanities and Social Sciences (HSS) Building, Room A202

8:15-8:50 Registration

8:50-9:00 Opening: Keiko Murasugi (Nanzan University)

9:00-10:00 **Keynote Speech 1**
Chair: Jo-Wang Lin (National Chiao Tung University)

C.-T. James Huang (Harvard University/Academia Sinica)
Passives forever: control, raising and implicit arguments…….....14

10:00-10:15 Coffee Break

**Session 1**
Chair: Miao-Ling Hsieh (National Taiwan Normal University)

10:15-11:00 Satoshi Tomioka (University of Delaware)
Ellipsis with Focused Antecedent…….....15

11:00-11:45 Chi-Ming Louis Liu (Harvard University)
'Subjectless' sentences and ellipsis…….....18

11:45-12:30 Ting-chi Wei (National Kaohsiung Normal University)
Form and meaning mapping in Chinese fragment…….....21

12:30-1:30 LUNCH

1:30-2:30 **POSTER SESSION 1** (3rd floor lobby, Area B, HSS Building)

**1.** Suyoung Bae & Bum-sik Park (Dongkuk University)
The variability of the CMC effect in Korean…….....24

**2.** Samuel D. Epstein[a], Hisatsugu Kitahara[b] & T. Daniel Seely[c] (University of Michigan, Ann Arbor[a], Keio University[b], Eastern Michigan University[c])
*What do we wonder is not syntactic?…….....27

**3.** Yusuke Imanishi (Massachusetts Institute of Technology/Kwansei Gakuin University)
Default ergative: A view from Mayan…….....30

**4.** Hayeon Jang (Seoul National University)
The problem of nasal consonant epenthesis…….....33

**5.** Taewoo Kim (Seoul National University)
Rethinking the base of Korean verbal stems…….....36

**6.** Takeo Kurafuji (Ritsumeikan University/Harvard University)
NPI-Exceptives and Null Arguments: From Subtraction to Addition……...38

**7.** Hisashi Morita (Aichi Prefectural University)
How unanswerable questions turn into answerable…….....41

**8.** Nobuaki Nishioka (Kyushu University)
On the Scope of Negation in Japanese: Evidence from Kumamoto Dialect……..44

**9.** Toshiko Oda (Tokyo Keizai University)
Resumptive Pronouns of Degree in Clausal Yorimo(than)-Comparatives……..47

**10.** Saetbyol Seo & Semoon Hoe (Seoul National University)
Agreement of a Point-of-Viewer and a Jussive subject……..49

**11.** Koichi Tateishi (Kobe College)
The Phonology of an Abstract Suffix for Eventual Evidentiality in Japanese……....52

**12.** Hisao Tokizaki (Sapporo University)
Antisymmetry and Obligatory Contour Principle……..55

**13.** Riichi Yoshimura (Kyushu University)
Quantifier Raising Targeting at the Articulated CP Domain…….....58

**Session 2**
Chair: William Snyder (University of Connecticut)

2:30-315 Barry C.-Y. Yang (National United University)
Deriving the Illocutionary Force…….....61

3:15-4:00 Lyn Tieu[a] & Zheng Shen[b] (École Normale Supérieure[a], University of Connecticut[b])
Investigating superlatives in the littlest linguists…….....64

4:00-4:15 Coffee Break

**Panel on Syntactic Cartography in Comparative Perspectives**
Chair: Wei-tien Dylan Tsai (National Tsing Hua University)

4:15-5:00 Liliane Haegeman (Universiteit Gent)
Deriving Structural Deficiency…….....67

5:00-5:45 Hilda Koopman (University of California, Los Angeles)
Decomposition, cartography, and antisymmetry: scattering objects…….....69

5:45-6:15 Panel discussion
Moderator: Richard S. Kayne (New York University)

**Sunday, May 25, 2014**
All talks are at Humanities and Social Sciences (HSS) Building, Room A202

8:30-9:00 On-site registration

9:00-10:00 **Keynote Speech 2**
Chair: Hui-chuan Hsu (National Tsing Hua University)

Michael Kenstowicz (Massachusetts Institute of Technology)
The Emergence of Default Accent in Kyungsang Korean…….....71

10:00-10:15 Coffee Break

**Session 3**
Chair: Niina Zhang (National Chung Cheng University)

10:15-11:00 Theresa Biberauer & Ian Roberts (University of Cambridge)
Conditional inversion and types of parametric change…….....72

11:00-11:45 Mioko Miyama (University of Tokyo)
On the "Clausal-Connective" and "Nominal-Connective" *ka* 'or' in Japanese…….....75

11:45-12:30 Przemysław Tajsner (Adam Mickiewicz University)
On focus marking and predication in non-verbal copular constructions in Polish (with ample reference to Hausa)…….....78

12:30-1:30 LUNCH

1:30-2:30 **POSTER SESSION 2** (3rd floor lobby, Area B, HSS Building)

**1.** Shasha An, Rosalind Thornton, Stephen Crain & Peng Zhou (Macquarie University)
Mandarin-speaking children's interpretation of disjunction in Verb Phrase Ellipsis (VPE) structures…….....81

**2.** Rahul Balusu (English and Foreign Languages University)
Comparison, predication, and lexical semantics of PC nouns in Telugu….....83

**3.** Luosha Bi (City University of Hong Kong)
Chinese symmetric and asymmetric passives: towards a unified approach…….....87

**4.** Michael Barrie and Jaieun Kim (Songang University)
Korean Jussives and point of view.…….....90

**5.** Pritha Chandra & Gurmeet Kaur (Indian Institute of Technology Delhi)
A Phase-based Account of Punjabi Differential Subject Marking…….....93

**6.** Hideki Kishimoto (Kobe University)
The Locus of Case for Verb Compounds in Japanese…….....96

**7.** Xiao Li[a], Hongyong Liu[b] & Seunghun Lee[c] (Queens College, City University of New York[a], South China Normal University[b], Central Connecticut State University[c])
Comparisons with/without Degrees in Nuosu Yi…….....99

**8.** Hajime Ono[a] & Yu Ikemoto[b] (Tsuda College[a] , Kinki University[b])
Dependency-length effects in Japanese gapless relative clauses…….....102

**9.** Yosuke Sato (National University of Singapore)
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**10.** Takumi Tagawa (University of Tsukuba)
Cycle-sensitive suppletion in Japanese…….....107

**11.** Hideharu Tanaka (Osaka University)
Focus Particle Phrases in Japanese: Against the Modifier Hypothesis…….....110

**12.** Hideaki Yamashita (Yokohama City University)
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**Passives forever: control, raising and implicit arguments**

C.-T. James Huang
Harvard University and Academia Sinica

Non-canonical passives (with a semi-lexical predicate like English *get*, Mandarin *bei*, Taiwanese *hoo,* German *kriegen/bekommen*, French *faire*, Japanese *rare*, Korean *–I*, Vietnamese *bi,* etc.) have posed significant questions of analysis and interpretation, including whether they should be analyzed in terms of raising or control, how they differ from normal canonical *be*-passives semantically, and how the differences are to be accounted for. Recent accounts (e.g., in Alexiadou & Schäfer 2013) have converged on the points (a) that the non-canonical passives are not unitary across languages, (b) both control and raising are possible, even in the same language, depending on context and lexical choice. Although I argued in Huang (1999) for deriving the Mandarin long passive via predication (for the long passive) and control (for the short passive), in Huang (2013) it is shown that while some passive sentences continue to be best analyzed in terms of predication/control, others must be derived via raising into a non-thematic subject position, while still others may be derivationally ambiguous.

My talk will develop a further argument for the need of a raising derivation, based on the affectedness interpretation of a non-canonical passive, with respect to which argument in a given sentence denotes the Affectee. I argue that a raising *bei* is related to a control *bei* through the suppression of an Experiencer/Affectee argument, just as a passive verb is related to the active through the suppression of the Agent external argument. Suppression leads to the presence of implicit arguments (implicit agent for the main verb, implicit experiencer for *bei*), both existentially closed. Both the suppressed arguments may be overtly expressed (as oblique arguments, e.g. adjunct or applicative). A control *bei* has an overt Affectee as its thematic subject, while in a raising *bei* the Affectee turns implicit. This captures the fact that a Chinese passive often describes an event perceived as a misfortune, if not for the referent of its subject, then for the speaker or some other salient individual. (Thus a short passive like *tangguo bei chi-guang le* 'the candies got eaten up' involves two implicit arguments: an implicit Agent who ate the candies, and an implicit Affectee who suffers from it.) I argue that there are two sources for the existence of an Affectee argument: (a) it may arise by virtue of being an 'outer' object (mid-Applicative or high applicative) of the main predicate (not necessarily limited to a passive), where the height of the applicative corresponds to the degree of adversity (cf. Washio 1993), and (b) it may arise by virtue of the argument structure of *bei.* Languages may differ in whether they exhibit either or both types.

**Ellipsis with Focused Antecedent**

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University of Delaware

Sugisaki (2012) and Ikawa (2012) note that wh-phrases cannot be the antecedents of empty arguments in Japanese. In (1), for example, the second instance of nani 'what' cannot be silent although it can be repeated with prosodic reduction, which indicates the discourse familiarity.

(1) Mari-wa nani-o tabe-mashita-ka, sorekara, Mika-wa *~~nani-o~~ tabe-mashita-ka
Mari-Top what-Acc eat-past-Q, and.then Mika-Top what-Acc eat-past-Q
`Intended: What did Mari eat, and what did Mika eat?'

In light of the observation by Takahashi (2008) that Japanese empty arguments can stand for quantificational DPs, this fact is unexpected, as all the known syntactic/semantic/pragmatic conditions are met. In this talk, I frame the problem of wh-antecedents in Japanese in a larger context; a phrase that contains a wh-phrase but excludes the C0 that licenses it cannot be elided. In English, for instance, ellipsis can contain a wh-phrase only if it also elides the C0 that licenses it.

(2) a. Who wonders what Anna gave to whom, and *who wonders what Anna didn't?
b. Who wonders what Anna gave to whom, and who doesn't? (possible only if whom takes the embedded scope.)
c. Who wonders what Anna gave to whom, and *who actually ASKED her what.
d. I know which congressman asked which diplomat went to which country, but I don't know which Senate. (possible only if which country takes the most embedded scope.)

Thus, Sugisaki/Ikawa's puzzle is a part of this larger generalization. Sugisaki's (2012) account is based on Saito's (2007) theory of argument ellipsis that obligatory agreement between an argument DP and a higher head rules out argument ellipsis. While agreement is only optional in Japanese, a wh-phrase must agree with the licensing the C0. The intended antecedent wh-phrase first agrees with the $C^0$. At the ellipsis site, this wh-phrase is LF-copied, but it cannot agree with the second $C^0$, as the relevant feature has already been checked off. This account nicely captures the lack of 'independence' of a wh-phrase in terms of feature agreement. The analysis also extends naturally to the English cases in (2). There are, however, a few difficult challenges that it must overcome. Saito's agree-based analysis of argument ellipsis has little to say about languages like Hindi, Kannada, and many other languages in the Indian Subcontinent, which have rather rich agreement but also allow silent arguments of the Japanese type. Second, `agreement'-like information is often ignored/neutralized in ellipsis. Consider, for instance, the case of `dependent plural', which is believed to be a morpho-syntactic agreement phenomenon without any semantic import (see (3a)). A singular-plural morphological mismatch is tolerated under ellipsis, as shown in (3b).

(3) a. Elephants have long trunks (= In general, an elephant is expected to have a long trunk).
b. Elephants have long trunks, so your elephant should [VP have a long trunk], too.

Finally, as Ikawa (2012) points out, the agree/feature-based analysis works the best within the LF copy theory. While such an analysis may be justified for argument ellipsis in Japanese, it is highly debatable that VP ellipsis and sluicing in English also involve LF copy. I will

present an alternative solution, based on Beck's (2006) Neo-Hamblin Semantics of wh-interrogatives, which has the following core ingredients: (i) Wh-phrases only have focus values, lacking ordinary values, in the dual semantic value system of Rooth (1992). Any constituent that
contains a wh-phrase also has no ordinary value until it meets a Q-Operator in the derivation. (ii) focus values are derived via focus indices, which correspond to designated variables whose values are determined by distinguished assignments (cf. Kratzer 1991). (iii) The role of the Q-Operator is to elevate the focus value of a wh-containing constituent to the ordinary value. I argue that the ineligibility of a wh-antecedent is a matter of semantic recoverability, which is a necessary (but not a sufficient) condition for ellipsis, and that semantic recoverability requires the denotation of a missing expression to have a defined meaning.

(4) (1st version) Missing elements in ellipsis must be semantically recoverable. For any linguistic expression α, α is semantically recoverable only if $||\alpha||^{g}$ is defined for some *g*.

The undefined nature of a wh-phrase or a wh-containing phrase makes it an illegitimate antecedent for ellipsis. It turns out, however, that there is an even larger generalization that the wh-antecedent fact is a part of. Originally observed by Heim (1997), Han and Romero (2004, fn11) present the following generalization based on examples like (6).

(5) Focus Deletion Constraint (plus its exception): Focus-marked constituents at LF can not delete at Spell-Out, unless the ellipsis site contains both the focus-marked constituent and its associated squiggle operator.

(6) a. Mary only told John to eat FRUITS in the morning.
*Sue only$_C$ [~F1$_C$ told him to [VP ~~eat [fruits]F1 in the morning~~ ]], as well.
b. Mary only told John to eat FRUITS in the morning.
Sue did [VP ~~only$_C$ [~F1$_C$ told him to eat [fruits]F1 in the morning~~], as well.

This generalization seems too familiar to be an issue independent of the problem of wh-antecedents in ellipsis. The first version of the semantic definedness condition does not work, however, because a focused non-wh-expression does have a denotation: For any expression α and focus index Fi, $||\alpha Fi||^{g} = ||\alpha||^{g}$ and $||\alpha Fi||^{g;h} = h(i)$ if $i \in Dom(h)$. In other words, the ordinary semantic value of $[\textit{fruits}]_{F1}$ is simply ||fruits||. To account for both wh- and non-wh cases of focused antecedents, I propose to revise the second half of (4) to (7).

(7) (Final version) For any linguistic expression α, α is semantically recoverable only if for any ordinary assignment g and any (total) distinguished assignment h, $||\alpha||^{g,h} = ||\alpha||^{g}$.

In (6a), the meaning of the missing VP under g,h is λx. x eats h(1), which is <u>not</u> identical to its meaning under g alone; λx. x eats fruits. No such mismatches in (6b) because the focus index on fruits is `used up' or `closed off' by the co-indexed ~ operator associated with only. With this revision, wh-antecedents come out as special cases of (7). They can never satisfy the condition as they fail to denote under g alone. If time permits, I will discuss two further issues. (i) The current analysis can be extended to the problems pointed out by Ikawa (2012). The restriction similar to the one discussed here is also found in the cleft constructions and NP-*sika*, an NPI meaning `anything/anyone but'. I will show that both of them are also focus-sensitive structures that require the presence of focus indices. (ii) Kratzer's original

argument for F-indices must be revisited. Her so-called `Tanglewood' sentence seems to elide a VP that contains an expression with an unbound F-index. I will review an alternative analysis, such as the one proposed by Schwarz (1999) to capture the intended focus meaning of the Tanglewood sentence without appealing to the elision of an unbound F-index.

Partial References: Beck, S. (2006), "Intervention Effects Follow From Focus Interpretation." *Natural Lan- guage Semantics* 14: 1–56 .Heim, I. (1997), "Predicates or Formulas? Evidence from Ellipsis." In *Proceedings of SALT 7*, 197–221. Ikawa, H. (2012), "What the Ineligibility of Wh-phrases for Argument Ellipsis Tells us," In *GLOW in Asia IX Proceedings*. Saito, M. (2007), "Notes on East Asian Argument Ellipsis." *Language Research* 43: 203–227. Sugisaki, K. (2012), "A Constraint on Argument Ellipsis in Child Japanese." In BUCLD 36 Proceedings.

# ‘Subjectless’ Sentences and Ellipsis

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**GOAL:** This paper aims to demonstrate that some Chinese sentences that do not contain subjects should be taken to result from focus movement followed by TP-ellipsis, rather than being analyzed as containing *pro* or topic-bound variables.

**BACKGROUND:** Based on Binding Principle B and the Generalized Control Rule proposed in Huang (1984), empty subject positions such as the one in (1) should be considered variables when referring to a discourse topic.

(1) *ec* lai le.
come SFP
‘[He] came.’

**PUZZLE**: Dropping subjects alone in Chinese sentences, in fact, is not as straightforward as we might think. The following example shows that, even if *John* is identified as a prominent discourse topic in the end of Speaker A’s utterance, omitting the subject co-referential with this topic in the sentence uttered later still results in unacceptability (assuming that Speaker A’s utterance below is in Mandarin Chinese).

(2) Speaker A: You know what! When I was shopping downtown with my boyfriend yesterday, I saw Mary having lunch with John in the food court. The T-shirts that they wore had similar colors and patterns. It looks like they’re dating. Do you know which John I am talking about? The $John_i$ who plays basketball very well in my class.
Speaker B: *Shenme! $e_i$ renshi Mali.
what know Mary
‘What! [John] knows Mary!?’

This fact raises a question: when can speakers of Mandarin Chinese use ‘subjectless’ sentences?

**ANALYSIS:** Sentences without subjects, such as (3b), are legitimate when they serve as an answer to *wh*-questions like (3a).

(3) a. Yuehan xianzai zheng zai zuo shenme?
John now PROG. at do what
‘What is John doing now?’
b. Kan dianshi.
watch TV
‘He is watching TV now.’

There are several pieces of evidence demonstrating that the VP in (3b) is not preceded by an empty subject position.

First, if the pre-verbal empty subject position were *pro*, we expect that inserting *ta* ‘he’ in the sentence-initial positions in (3b) would not yield any ungrammaticality; on the other hand, if the pre-verbal empty subject position in (3b) were a variable bound by a covert topic,

we expect that when the covert topic is realized overtly, the resulting sentence should still be acceptable. However, (4) and (5) below do not bear out these predictions.

(4) #Ta kan dianshi.
he watch TV
'He is watching TV now.'

(5) #Yuehani, eci kan dianshi.
John watch TV
'John is watching TV now.'

The fact that (4) and (5) are not felicitous answers to (3a) suggests that (3b) cannot be analyzed as possessing an empty subject position.

Given these considerations, I propose that (3b) should be taken to derive via focus movement followed by TP-ellipsis. The derivation of (3b) is shown as follows:

(6) $[_{FP}\ [_{vP}\ kan_i\ [_{VP}\ t_i\ dianshi]]_j\ F_{[E]}\ [_{TP}$ ~~ta xianzai zheng zai $t_j$~~ ]]
watch TV he now PROG. at

Following Huang (1994), I assume that there is V-to-*v* movement in Mandarin Chinese; in addition, inspired by Merchant (2004), I propose that *v*P moves to the Spec of FP to check the uninterpretable focus feature *u*F* on [E], since *v*P is the focused part of the sentence. After the feature-checking is completed, the [E] feature on F initiates TP-ellipsis, which deletes everything within the TP, including the subject.

The analysis built on *v*P-fronting and TP-ellipsis gains support from the following pieces of evidence. First, non-*v*P-level constituents cannot be moved with the preposed *v*P, which means that temporal adverbials like *xianzai* 'now' in (3a) cannot co-occur with the *v*P-answer in (3b). The following unacceptable sentence confirms this prediction.

(7) *Xianzai kan dianshi.
now watch TV

Second, when the *v*P-answer contains the reflexive *ziji*, this reflexive must refer to the subject in the *wh*-question.

(8) Kan ziji mai-de shu.
read self buy-DE book
'He is reading the book that he bought.'

(8) can serve as a felicitous answer to (3a), and the reflexive *ziji* can only refer to *Yuehan* 'John.' We can account for the co-referentiality between *ziji* and *Yuehan* by saying that (8) is derived from a configuration like (6), where *ziji* is bound by the subject *ta* 'he' which takes *Yuehan* 'John' in the preceding *wh*-question as its antecedent prior to *v*P-movement.

Binding Principle B, likewise, provides evidence in favor of the present analysis.

(9) Chi ta(de) mama zuo-de binggan.
eat his mother make-DE cookies
'He is eating the cookies that his mother made.'

When (9) is used to answer (3a), the pronoun *ta(de)* 'his' must co-refer with *John*. This interpretation can be said to result from a configuration like (6), in which *ta(de)* is bound by the subject before *v*P-fronting takes place.

Lastly, such *v*P-answers can carry a negative meaning, when being preceded by appropriate questions (see also Holmberg 2003).

(10) a. Yuehan zuowan mei zuo shenme shi?
John last-night not do what thing
'What didn't John do last night?'
b. Xie zuoye.
write homework
'He didn't do homework.'

Although (10b) does not appear with a negative marker, its meaning is equivalent to the one that has it. This fact suggests that (10b) is derived from a full-fledged sentence that contains the negative marker, *mei* 'not'. The derivation of (10b) is shown below.

(11) $[_{FP}\ [_{vP}\ xie_i\ [_{VP}\ t_i$ zuoye$]]_j$ $F_{[E]}\ [_{TP}$ ~~ta zuowan mei $t_j$~~ ]]
write homework he last-night not

(11) also illustrates that it is TP-ellipsis that prevents the negative marker from appearing in the surface structure.

**CONCLUSION**: This paper argues that (i) in Mandarin Chinese, it is not easy to drop subjects in sentences, even when a prominent discourse topic is generated, and (ii) the apparent empty subject position in answers to *wh*-questions is the side effect of *v*P-movement and TP-ellipsis. This analysis suggests that these sentences cannot be considered genuine null-subject sentences, since the canonical subject position, the Spec of TP, remains filled with a nominal phrase throughout the derivation.

Selected references: **Holmberg, Anders.** 2003. Topic drop or VP focus. In *Grammar in Focus. Festschrift for Christer Platzack 18*, 159-166. **Huang, C.-T. James.** 1984. On the Distribution and Reference of Empty Pronouns. *Linguistic Inquiry* 15:531-574. **Huang, C.-T. James.** 1994. Verb movement and some syntax-semantics mismatches in Chinese. In *Chinese Languages and Linguistics 2*, 587-613. **Merchant, Jason.** 2004. Fragments and Ellipsis. *Linguistics and Philosophy* 27:661-738.

**Form and Meaning Mapping in Chinese Fragment**

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This paper argues that the derivational difference between fragment answer (FA) and fragment question (FQ) in Chinese lies in whether a fragment moves or not. FA is a base-generated fragment structure, whereas FQ is derived from movement and ellipsis.

Chinese FQ and FA diverge in at least four respects. First, FQ and FA differ in form and function. The interpretation of FQ depends upon a declarative antecedent clause or a context. It constitutes a constituent question, ended up with a particle *ne* in (1). On the contrary, FA gives an answer to a constituent question in (2).

(1) A: *Zhangsan* huilai-le. B: *Lisi* ne?
Zhangsan back-ASP Lisi PART
'Zhangsan has already come back.' 'What about Lisi?'

(2) A: ta kanjing-le *shei*? B: *Lisi*. (Ta kanjian-le *Lisi*.)
he see-ASP who Lisi he see-ASP Lisi
'Who did he see?' 'Lisi. (He saw Lisi.)'

Second, FQ is less ubiquitous in distribution than FA. Adverbs or modals are not allowed to form FQ in (3). As to FA, if there is a licit *wh*-question, there will be an FA, which includes syntactic categories such as DP, VP, PP, AP, AdvP (4) and even modal (to an A-not-A question).

(3) A: ta *dagai* hui lai. B: *xianran ne?
he probably will come apparently PART
'He probably will come.'

(4) A: ta yixiang *zheme* chuli ziji-de shi? B: (yixiang) xiaxinyiyi-de.
he always how deal.with self-DE business always carefully-DE
'How does he deal with his own business normally?'

Third, with respect to island effect, FQ is sensitive to CNPC (5), *wh*-island, and adjunct island, whereas FA is island-insensitive in (6). Once a *wh*-question is blocked within island, its FA is impossible, as expected in (7).

(5) A: ta zhaodao [*Zhangsan* zui ai de bi]. B: **Lisi* ne?
he find Zhangsan most like DE pen Lisi PART
'He found the pen that Zhangsan likes most.' 'What about Lisi?'

(6) A: ta zhaodao [*shei* zui ai de bi]? B: Lisi.
he find who most like DE pen Lisi
'Who is the person x such that he found the pen that x likes most?'

(7) *[[ ta *weishenme* xie] de shu] zui youqu? (Huang 1982:527)
he why write DE book most interesting
'Books that he wrote why are most interesting?'

Fourth, in passive *bei* structure, FQ, either in the form of NP or of *bei* NP, is undesirable as in (8). In contrast, for the *wh*-word after passive *bei*, FA can be in the form of NP or of PP as in (9).

(8) A: ta *bei Zhangsan* da-le. B: *Lisi ne?/ *bei Lisi ne?
he BEI Zhangsan hit-ASP Lisi PART BEI Lisi PART
'He was hit by Zhangsan.' '(lit.)What about (by) Lisi?'

(9) A: Zhangsan *bei shei* da le? B: (bei) Lisi.
Zhangsan BEI who hit ASP BEI Lisi.
'(lit.) By whom was John beaten?'

All these differences imply that each of the fragmentary structures has its own derivation.

We propose that Chinese FQ has a fully-fledged structure before ellipsis under a revised split CP hypothesis (Craenenbroeck 2004). Accordingly, the left periphery of CP is left-branching with $C_1$ and $C_2$ on the right (Tang 1989) as in (10).

(10) $[_{CP1}\ Wh_{OP}\ [_{C'1}\ [_{CP2}\ Lisi_{i[+F]}\ [_{C'2}\ \sout{[_{TP}\ t_i\ huilai\ le\ ]}\ C_{2E[\sout{uF*}, \sout{uWH*}]}\ ]]\ \ ne_{[+wh]}\ ]]$

$C_2$ serves as a covert Foc marker (Rizzi 1997) with two uninterpretable [*u*F*, *u*WH*] features on [E], being responsible for attracting focus movement and triggering TP-ellipsis. Given Bare Phrase Theory (Chomsky 1995), as $C_2$ is merged with TP, it will actively attract focus constituent *Lisi* to the Spec$CP_2$ to check against the focus feature [*u*F*]. Next, the final particle *ne* on $C_1$ with [+WH] feature merges with $CP_2$ to type the clause as an interrogative. Once a covert *wh*-operator merges to Spec$CP_1$, [*u*WH*] on $C_2$ can be checked against [+WH] on $C_1$. At this stage, the [E] feature on $C_2$ is fully licensed to trigger TP-deletion.

Under this deletion analysis, adverb FQ in (3) is ruled out because an adverb cannot be raised to a focused position to form FQ. Similar restriction can be identified in another focus structure, *lian ... dou* 'even' pattern in Chinese. Besides, modal FQ is prohibited, since modal is a verbal head (Lin & Tang 1995), not eligible to move to the Spec$CP_2$. However, PF deletion fails to explain why islands such as CNPC, adjunct island, and *wh*-island, cannot be repaired by the TP ellipsis, since all the defective traces should be elided and repaired under TP ellipsis, contrary to fact. To resolve this problem, we propose that deletion does not occur at PF but in the process of computation (Baltin 2007, 2012). If the focused constituent fails to move to Spec$CP_2$ prior to TP ellipsis or leave uninterpretable features unchecked (Funakoshi 2011), the FQ will crash. For instance in (5), the relative clause in Chinese can be formed by first moving a null OP to the embedded SpecCP. As required by the Phase Impenetrability Condition (Chomsky 2000, 2001), the focus *Lisi* has to move through the phase edge SpecCP to escape the phase CP. The movement will be blocked by the null OP, causing the FQ to crash as in (11).

(11) $*[_{DP}\ [_{D'}\ D\ [*_{CP}\ OP\ Lisi_i\ [_{TP}\ t_i\ zui\ ai\ de]\ [_{NP}\ bi\ ]]]]$

The passive *bei* also lends support to the blocking effect in terms of focus movement and TP-ellipsis analysis. The structure of the Chinese passives has been argued to be syntactically similar to that of the tough construction in English (Huang 1999, etc.). That is, the tough predicate *bei* selects a clausal complement containing an operator-variable chain. Along this vein, the NOP in the embedded SpecCP after *bei* will prevent the target *Lisi* from raising to the same position in (12). Thus, at the point when the matrix TP deletes, the target is still within the embedded CP domain, causing the FQ to crash. Moreover, *bei Lisi* is not a syntactic constituent, failing to extract together to form FQ, **bei Lisi ne*.

(12) $*[_{CP1}\ [_{CP2}\ [_{TP}\ ta_i\ [\ bei\ [_{CP}\ OP_i\ Lisi\ [_{TP}\ t_{Lisi}\ da\ le\ t_{OPi}\ ]]]]]\ ne]$ (Passive)

The deletion account cannot apply to Chinese FA for two reasons. First, given that focus movement to Spec $CP_2$ is correct, raising adverb or modal head to the focus position should be barred in FA, contrary to the fact in (4). Second, if the early deletion applies to Chinese FA, FA within islands should be blocked and deleted as well, causing it to crash just like FQ, contrary to the fact in (6). We propose that the island repair effect is due to the fact that Mandarin Chinese is a *wh*-in-situ language, which does not undergo any form of overt

*wh*-movement (Huang 1982, Tsai 1994). With base-generated *wh*-words, Chinese FAs within islands are predicted to be legitimate, since no movement is involved. That explains the apparent island repair effect in the FA within islands. Following Saito's (2004) copular analysis, Nishigauchi & Fujii (2006) argue that Japanese FA without postposition is simply a bare-copular structure, [Pro XP *da/desu*], consisting of a *Pro*, fragment, and copula, not showing island effect. Along this line, we propose that Chinese FA is a simple structure [*pro* XP], in which *pro* can construe with its antecedent in the constituent question by virtue of a copying operation at the discourse-level (syntactic plus interface account, Culicover & Jackendoff 2005:240). The analysis can explain the ubiquitous distribution of the FA in (2) and (4), apparent island repair effect in (6). The grammaticality of (*bei*-)NP in (9) proves that Chinese FA does not come from a tough structure like (12) but a simple (coverb-)NP predicate.

In sum, the derivation of fragment in Chinese depends on whether a fragment moves or not, shedding light on the cross-linguistic investigation of fragment.

**References**

Baltin, M. 2012. Deletion versus *pro*-forms: A false dichotomy? *Natural Language and Linguistic Theory* 30.2: 381-423.

Merchant, J. 2004. Fragments and ellipsis. *Linguistics and philosophy* 27: 661-738.

**The Variability of the CMC Effect in Korean**

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**[Introduction]** It has been observed that certain syntactic operations must obey the Clause-Mate Condition (CMC). That is, when two related XPs undergo movement, they must originate within the same clause. In particular, Lasnik (2013) observes that multiple sluicing (MS) in English seems to obey the CMC. Thus, in contrast to (1), when one wh-phrase originates in the embedded clause and the other in the matrix clause as in (2), it exhibits the CMC effect.

(1) a. Fred thinks a certain boy talked to a certain girl.
b. I wish I could remember which boy to what girl.

(2) a. A certain boy said that Fred talked to a certain girl.
b. *I wish I could remember which boy to what girl.

In general, Korean also exhibits the CMC effect. In this talk, however, we first report that there are certain cases that seem insensitive to the CMC, and attempt to provide an analysis of them.

**[The Data]** Korean allows Multiple Fragment Answers (MFA) and just like English multiple sluicing in (1) and (2), Korean MFAs exhibit the CMC effect, as shown in (3) and (4):

(3) A: Max-ka [$_{CP}$ nwu-ka mwues-ul mekess-ta-ko] malhayss-ni?
Max-Nom who –Nom what-Acc eat-Dec-C said-Q
'Who did Max say ate what?'
B: Bill-i ppang-ul
Bill-Nom bread
'Max said Bill ate bread.'

(4) A: nwu-ka [$_{CP}$ John-i mwues-ul mekess-ta-ko] malhayss-ni?
who -Nom John–Nom what-Acc eat-Dec-C said-Q
'who said that John ate what?'
B: *Bill-i ppang-ul
'[intended meaning]: Bill said John ate bread.'

By contrast, the CMC effect is not observed for examples like (5) and (6): (5B) involves two fragments/remnants: one is matrix dative object, the other is embedded subject. (6) is the same as (4) except that the embedded object appears as the first fragment:

(5) A: Max-ka nwukwu-ekey [$_{CP}$ nwu-ka ppang-ul mekess-ta-ko] malhayss-ni?
Max-Nom who-to who-Nom bread-Acc speak-Dec-C said-Q
'Who did Max tell who ate bread?'
B: Bill-ekey John-i
Bill-to John-Nom
'Max told Bill John ate bread'

(6) A: nwu-ka [$_{CP}$ John-i mwues-ul mekess-ta-ko] malhayss-ni? (=(4A))
who -Nom John-Nom what-Acc eat-Dec-C said-Q
'who said that John ate what?'
B: ?ppang-ul Max-ka
bread-Acc Max-Nom
'lit. Bread, Max said Bill ate.'

Observing that Japanese MS also exhibits the CMC effect, Takahashi (1994) proposes an amalgamation-based analysis, according to which the lower *wh*-remnant first adjoins to the upper remnant, forming a cluster/amalgamation and it moves to Spec,CP, followed by TP ellipsis. Crucially, he argues that the amalgamation cannot take place across a clause boundary. This analysis, however, cannot explain (5) and (6), since the two remnants originate from different clauses, blocking the

amalgamation process. Lasnik (2013) provides a different analysis regarding the English MS in (1) and (2). He proposes that while the first remnant undergoes the usual leftward wh-movement to Spec CP, the second one undergoes rightward movement. This rightward movement cannot take place out of the embedded clause due to the Right Roof Constraint (Ross 1969), yielding the CMC effect in (2). For the grammaticality of (1), he argues that the source can be a short construal reading that I wish I could remember which boy talked to what girl. However, this analysis cannot apply to (5)-(6) for the same reason.

**[Analysis]** We first assume following Merchant (2004) and Park (2005) that (case-marked) fragment answers are derived by ellipsis, preceded by leftward movement of the remnant (possibly to FP). As for the seemingly CMC-insensitive MFAs in (5) and (6), we propose that there is an escape-hatch to evade the CMC, no matter what the nature of CMC is. Specifically, we argue that the grammatical MFAs all allow a 'hidden' derivation that involves fronting of the embedded CP, as an answer. For example, as an answer to (5A), one can alternatively utter (7), where both the matrix verb and the matrix subject are elided:

(7) Bill-ekey [CP John-i pro (=ppang-ul) mekess-ta-ko]
Bill-to John-Nom bread-Acc ate-Dec-C
'lit. to Bill, John ate bread.'

We argue that (7) involves leftward movement of *Bill-ekey* and CP to multiple specifiers of XP/FP, followed by TP ellipsis, as in (8a)-(8c). When the focused embedded subject (*John-i*) in the fronted CP is extracted out of it, (8d) is derived. At this point, CP can be elided as shown in (8e). This is how (5B) is derived without violating the CMC:

(8)a. 〔$_{TP}$ *pro*(=Max) Bill-ekey 〔$_{TP}$ John-i *pro*(=ppang) mekesstako〕 malhaysse.〕
b. 〔$_{XP}$ Bill-ekey$_1$ 〔$_{TP}$ *pro*(=Max) t$_1$ 〔$_{CP}$ John-i *pro* mekesstako〕 malhaysse.〕 〕
[fronting of *Bill-ekey*]
c. 〔$_{XP}$ Bill-ekey$_1$ 〔$_{CP}$ John-i *pro*(=ppang) mekesstako〕 $_2$ ~~〔$_{TP}$ *pro*(=Max) t$_1$t$_2$ malhaysse.〕~~ 〕
[CP-fronting + TP-ellipsis]
d. 〔$_{XP}$ Bill-ekey$_1$ John-i$_3$ 〔$_{CP}$ t$_3$ *pro*(=ppang) mekesstako〕 $_2$ ~~〔$_{TP}$ *pro*(=Max) t$_1$t$_2$ malhaysse.〕~~
[fronting of *John-i*]
e. 〔$_{XP}$ Bill-eky$_1$ John-i$_3$ ~~〔$_{CP}$ t$_3$ *pro*(=ppang) mekesstako〕~~ $_2$ ~~〔$_{TP}$ *pro*(=Max) t$_1$t$_2$ malhaysse.〕~~ 〕
[CP-ellipsis]

As predicted by the proposed analysis, there is a striking parallelism between the MFAs in (3), (4) and (6) and the CP-fronting possibility, as shown below:

(9) [$_{CP}$ Bill-i ppang-ul mekess-ta-ko] [alternative answer to (3A)]
Bill-Nom bread-Acc ate-Dec-C
(10) [$_{CP}$ Bill-i [$_{CP}$ *pro*(=John) ppang-ul mekess-ta-ko] [alternative answer to (4A)]
Bill-Nom bread-Acc ate-Dec-C
(11) ?[$_{CP}$ *pro*(=John) ppang-ul mekess-ta-ko] Max-ka [alternative answer to (6A)]
bread-Acc ate-Dec-C Max-Nom

When the focused NPs in the fronted CP in (9) are both extracted to XP, followed by CP-ellipsis, (3B) is derived. (11) involves CP fronting above the fronted matrix subject, *Max-ka*. When the object is further extracted out of CP and then the CP is elided, (6B) is derived. (10), however, is unacceptable as an answer to (4A). Instead, (10) can only yield the unintended short reading that Bill ate bread. Given that the most natural answer involves *pro* when referring to an entity in the antecedent, *a priori* there is no reason not to allow (10) as the intended answer. We claim that this problem is related to processing difficulties. According to the Minimal Attachment Principle (cf. Frazier and Fodor1978, Yoon 2013), the parser

chooses the best way to minimize the processing load. This means that the parser processes (10) in a linear order as soon as possible. Therefore, the parser first decides *Bill-i* as the embedded subject since it is linearly the first overt NP, yielding the unintended meaning.
**[Consequences]** If the proposed analysis is on the right track, it follows that like English fragment answers in (12B) (Merchant 2004), Korean does not allow embedded fragment answers as in (13B) because the embedded clause in Korean does not have the XP/FP layer.

(12) A: What did Bill ate? B: a. an apple
b. *John said that an apple.

(13) A: Mary-ka mwuess-ul mekess-ni? B: *Bill-i ppang-ul malhaysse.
Mary-Nom what-Acc ate-Q Bill-Nom bread-Acc said
'What did Mary ate? [intended meaning]: 'Bill said Mary ate bread.'

This implies that the extraction of the remnant out of the fronted CP can only target the matrix XP, not the potential XP extended from the fronted CP. This is shown in (8d), and is further confirmed by (14B), where *ecey* 'yesterday' allows the matrix reading even though the embedded subject precedes it.

(14) A: John-i nwukwu-ekey [$_{CP}$ nwu-ka olkela-ko] encey malhayss-ni?
John-Nom who-to who-Nom come-C when said-Q
'When did John say who will come?'
B: ?Mary-ekey Bill-i ecey
Mary-to Bill-Nom yesterday
'Yesterday, John said to Mary that Bill will come.'

**[Selected References]** Frazier, L. & J, Fodor. (1978). The sausage machine: A new two-stage parsing model. *Cognition*, *6*(4), 291-325./ Lasnik, H. (2013). Multiple sluicing in English? Syntax./ Merchant, J. (2004). Fragments and ellipsis. *Linguistics and philosophy*, *27*(6), 661-738. / Takahashi, D. (1994). Sluicing in Japanese. *JEAL*, 3(3), 265-300.

# *What do we wonder is not Syntactic?

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Starting with the optimal assumption that there is just one interrogative complementizer $C_Q$, used in both yes/no- and *wh*-interrogatives, we first identify a morpho-phonological requirement of English for the proper interpretation of a *yes/no*-question whose label is the head $C_Q$. We then explain "obligatory syntactic halt" in *wh* criterial position as the only way to circumvent a violation of this requirement. Crucially, under this morpho-phonological re-analysis, there is no syntactic "halting" constraint (but see Rizzi 1997 and Epstein 1992 for contrary views); rather, *wh*-movement from *wh* criterial position is allowed to apply in the narrow syntax (NS), but if it does, an independently motivated morpho-phonological requirement is violated.

What are the minimum assumptions concerning $C_Q$? Suppose (i) there is only one $C_Q$ in the (English) lexicon, (ii) every syntactic object must be labeled at CI (Chomsky 2013), (iii) the label $C_Q$, unaccompanied by a "*wh*-specifier," is interpreted as a *yes/no*-question at CI, and (iv) the label Q, a syntactically prominent feature shared by the two heads $C_Q$ and $WH_Q$, is interpreted as a *wh*-question at CI (Chomsky 2013). Given this much, consider a matrix *yes/no*-question of the following form:

(1) $[_{\alpha}\ C_Q\ [_{TP}$ John likes a dog]]

Adopting the labeling analysis of Chomsky (2013), in (1), the label of α is the head $C_Q$ since α is of the form {H, XP} where the head H determines the label. However, as Noam Chomsky (personal communication) points out, (1) is excluded with neutral or falling intonation. That is, in English, matrix *yes/no*-questions require either T-to-C inversion or rising (question) sentential prosody. Presumably, one or the other is needed as an overt indicator of the otherwise undetectable presence of $C_Q$. This morpho-phonological requirement also explains the deviance of embedded *yes/no*-questions such as (2):

(2) * You wonder $[_{\alpha}\ C_Q\ [_{TP}$ John likes this dog]].

In (2), the label of α is $C_Q$, and this label $C_Q$, unaccompanied by a "*wh*-specifier," is interpreted as a *yes/no*-question at CI. The hypothesized problem with (2) is that T-to-C is unavailable as is rising intonation in English embedded clauses. The requisite overt marker of *yes/no*-question interpretation in embedded clauses is *if* (and perhaps *whether*), as in *You wonder if John likes this dog.*

This morpho-phonological analysis of (1) and (2) sheds new light on the following contrast, exhibited by (3a,b) (where *t(race)* is used only for expository purposes, representing a copy of the category that undergoes movement):

(3) a. You wonder $[_{\alpha}$ [which dog] [ $C_Q\ [_{TP}$ John likes *t* ]]].

b. *Which dog do you wonder $[_{\alpha}$ *t* [ $C_Q\ [_{TP}$ John likes *t* ]]]?

Under the labeling analysis of Chomsky (2013), in (3a), the label of α is the Q-feature, shared by the two heads, namely $C_Q$ and the operator $WH_Q$, and this label Q, accompanied by a "*wh*-specifier," is interpreted as a *wh*-question at CI. In (3b), however, minimal search fails to

identify the Q-feature (shared by the two heads $C_Q$ and $WH_Q$) as the label of α, because the operator $WH_Q$ in α is "invisible" to minimal search. That is, Chomsky (2013) takes $WH_Q$ to be inside α if and only if every occurrence of $WH_Q$ is a term of α. Thus, after *wh*-movement into the matrix clause, the lower copy of $WH_Q$ in α is "invisible" to minimal search when it searches α for its label-identification (see Epstein, Kitahara, and Seely 2012 for further empirical support of this invisibility analysis).

Notice the analysis proposed here asserts that the embedded clause α in (3b) cannot be interpreted as a *wh*-question, because *which dog* in the "specifier" of the embedded $C_Q$ is "invisible" to minimal search. It predicts that the label of α is the category $C_Q$ (recall α appears to minimal search as [$C_Q$ TP]), and although selection is thereby satisfied, as *wonder* selects $C_Q$, α cannot be interpreted as a *wh*-question. So what interpretation does (3b) receive?

We argue that α in (3b) receives a *yes/no*-question interpretation. The hypothesized problem with (3b) is then that T-to-C is unavailable as is rising intonation in English embedded clauses. Thus, contra Epstein (1992) and Rizzi (1997), we follow Chomsky (1995) in proposing an unconstrained NS that allows the movement depicted in (3b), and hypothesize that its anomaly is in fact due to peculiar aspects of overt English morpho-phonology; (3b) is out for essentially the same reason as (2) is.

Independent evidence that the anomaly of (3b) is due to the observed English morpho-phonological constraint comes from (the non-deviance of) the analog of (3b) in Japanese. Consider (4) (from Takahashi 1993):

(4) Nani-o Taroo-wa [Hanako-ga *t* katta ka] siritagatteiru no
what-ACC Taroo-TOP Hanako-NOM bought Q want-to-know Q
'What does Taroo want to know whether Hanako bought?'

Given that (4) converges and is interpretable, then assuming a universal semantics (see Chomsky 1986), (3b) must also converge at CI as non-gibberish. This compels us to attribute the anomaly in (3b) to neither an NS-specific halting constraint nor to an interpretive CI anomaly, but rather to (not fully explained) idiosyncratic, descriptively apparent, overt morpho-phonological properties of English.

If the proposed analysis of (1), (2), (3a,b), and (4) is on track, it suggests that "obligatory syntactic halt" in *wh* criterial position is in fact a syntactic illusion. There is no NS-specific halting constraint barring such *wh*-movement; rather, for these phenomena, we can maintain that simplest Merge applies freely and hence can execute *wh*-movement from a *wh* criterial position, but such movement necessarily leads to a violation of an independently motivated morpho-phonological requirement of English.

Summarizing, we identified and appealed to the following assumptions concerning $C_Q$:

(i) There is only one $C_Q$ in the (English) lexicon.
(ii) Every syntactic object (SO) must be labeled at CI (Chomsky 2013).
(iii) An SO, the label of which is identified as the head $C_Q$, unaccompanied by a "*wh*-specifier," is interpreted as a *yes/no*-question.
(iv) An SO, the label of which is identified as the Q-feature, shared by the two heads $C_Q$ and $WH_Q$, is interpreted as a *wh*-question (Chomsky 2013).
(v) English *yes/no*-questions require an overt indicator of the otherwise undetectable presence of $C_Q$ (e.g. T-to-C inversion or rising (question) sentential prosody, available only in matrix clauses).

(i)-(v) are all independently motivated, and to explain "obligatory syntactic halt" in *wh* criterial position, nothing more is needed. We argued that there is no need to invoke an

NS-specific halting constraint; the "halting" effect, observed in (3b), naturally follows from the morpho-phonological failure resulting from moving out of a *wh*-criterial position.

**Selected References**

Chomsky, N. 1986. *Knowledge of language: Its nature, origin, and use.* Praeger, NY.
Chomsky, N. 1995. *The minimalist program.* MIT Press, Cambridge, MA.
Chomsky, N. 2013. Problems of projection. *Lingua* 130, 33-49.
Epstein, S. D. 1992. Derivational Constraints on A'-Chain Formation. *LI* 23, 235-259.
Epstein, S. D., H. Kitahara, and T. D. Seely. 2012. Structure Building That Can't Be! In *Ways of structure building*, 253-270, Oxford University Press, Oxford.
Rizzi, L. 1997. The fine structure of the left periphery. In *Elements of grammar: Handbook of generative syntax,* 281-337. Kluwer, Dordrecht.
Takahashi, D. 1993. Movement of *wh*-phrases in Japanese. *NLLT* 11, 655-678.

**Default Ergative: A View from Mayan**

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**1. Overview:** This study analyzes the sharp difference in alignment between grammatical relations and ergative Case in the ergative splits of Kaqchikel and Q'anjob'al (Mayan). I propose a novel view that ergative Case may be assigned as *default Case* only when there is a Case-less DP, on the basis of new data from Kaqchikel and recent discoveries of Q'anjob'al.

**2. Issues**: Kaqchikel and Q'anjob'al are ergative agreement languages with a head-marking system in the sense of (Nichols 1986). They exhibit aspect-based split ergativity: perfective clauses show an ergative-absolutive pattern, whereas non-perfective clauses exhibit a nominative-accusative pattern. The latter pattern is illustrated for Kaqchikel (1) and Q'anjob'al (2). (The Kaqchikel data come from the author's original fieldwork in Guatemala.)

(1) a. y-**in**-ajin che atin- ïk. *Kaqchikel*
INC-A1s-PROG P bathe-NOML
'I am bathing.'

b. y-**in**-ajin che **ki**-k'ul-ïk ak'wal-a'.
INC-A1s-PROG P E3p-meet-NOML child-PL
'I am meeting children.'

(2) a. lanan-ø **ha**-way-i. *Q'anjob'al*
PROG-A3s E2s-sleep-IV
'You are sleeping.'

b. lanan-ø **hach** **w**-il-on-i.
PROG-A3s A2s E1s-see-DM-IV
'I am seeing you.' (Mateo Pedro 2009)

In Kaqchikel (1a-b), intransitive and transitive *subjects* are cross-referenced by the *absolutive* morpheme (=A) on the aspectual predicate *ajin*. The *direct object* of a transitive verb is cross-referenced by the *ergative* morpheme (=E), which is affixed to the nominalized verb (*k'ul-ïk* in (1b)). In contrast, Q'anjob'al displays a rather different alignment pattern in the nominative-accusative side of the split (2a-b): all subjects are cross-referenced by the *ergative* morpheme on the nominalized verbs (Mateo Pedro 2009), whereas the object is cross-referenced by the *absolutive* morpheme. This seemingly arbitrary ergative alignment observed in the two languages makes it difficult to predict which functional head is responsible for ergative Case (Bittner&Hale 1996 etc.). Since the ergative is aligned either with the subject (Q'anjob'al) or with the object (Kaqchikel), an inherent Case analysis (Woolford 1997 etc.) is hard to maintain because such analysis connects a particular thematic role (e.g. agent) with ergative Case.

**3. Analysis**: To explain the cross-linguistic variation of ergative alignment in nominative-accusative patterns of the ergative split, I claim that the object in Kaqchikel (1b) and the subjects in Q'anjob'al (2) receive ergative Case as *default* Case in a manner suggested for unmarked Case by Marantz (1991) and Baker&Vinokurova (2010), because they would be otherwise *Case-less*. I assume that the phi features of a DP receiving ergative or absolutive Case are reflected as the ergative or absolutive morpheme, respectively. **Supporting arguments (Kaqchikel):OBJ$_{Case\text{-}less}$=ERG$_{default}$** **First**, I argue that the aspectual predicate *ajin* in the Kaqchikel examples of (1) assigns absolutive Case to the subject and raises it to Spec-PredP. Evidence for a raising analysis of *ajin* comes from its compatibility with the inanimate subject in (3). As shown in (4), moreover, *ajin* can embed the experiential predicate *tïj poqon* "eat spicy=suffer" whose subject would be incompatible with an agent role.

(3) ri xik'ay n-ø-ajin che ru-q'aj-ïk ri kotz'i'j.
DET stick INC-A3s-PROG P E3s-break-NOML DET flower
'The stick is breaking the flower.'

(4) ri achin n-ø-ajin che ru-tïj-ïk poqon.
DET man INC-A3s-PROG P E3s-eat-NOML spicy
'The man is suffering.'

Examples (3) and (4) thus suggest that *ajin* is a raising predicate with no external (agent) theta role. **Second**, I argue, following Imanishi&Mateo Pedro (2013), that the nominalized transitive verb in Kaqchikel (=1b) undergoes passivization, thereby being unable to assign Case to the object. While the vast majority of transitive verbs in Kaqchikel including *k'ul* in (1b) do not show passive morphology, a class of verbs called derived transitives (*-j*) clearly show that nominalization of transitive verbs involves passivization. As seen in (5), the derived transitive *q'ete-j* "hug" is suffixed by the passive morpheme *-x* when it undergoes nominalization by *-ïk*. This morpheme appears with the passive form of the same verb: *q'ete-**x***
"to be hugged".

(5) rje' y-e-ajin chi ki-q'ete-**x**-ïk ri ak'wal-a'.
they INC-A3p-PROG P E3p-hug-PAS-NOML DET child-PL
'They are hugging the children.'

This strongly suggests that the nominalized verbs in (1b) and (5) are passivized. Combining the first argument with the second one, it is the *object* in (1b)/(5) that is Case-less and receives ergative Case as *default*. The derivation for (1b) is illustrated in (6).

(6) $[_{PredP}$ $SUB_i$ (=ABS) [Pred(=*ajin*) $[_{PP}$ $t_i$ [P $[_{DP}$ $t_i$ [D $[_{nP}$ $t_i$ [*n*(=NOML) $[_{vP}$ $t_i$ [$v_{PASSIVE}$ $[_{VP}$ V OBJ(=**ERG**$_{\textit{default}}$) ]]]]]]]]]]

On the other hand, the subject in the intransitive sentence (1a) moves to Spec-PredP and receives absolutive Case. Since there is no other DP that requires Case in the clause, no ergative appears in (1a). Importantly, D of a nominalized clause in (6) should not be a Case-assigner of ergative or genitive (genitive and ergative are homophonous across Mayan languages). If it assigned ergative/genitive Case, it would wrongly assign that Case to the subject both in (1a) and (1b) before the subject undergoes raising and receives absolutive Case. **Supporting arguments (Q'anjob'al):SUB$_{\textit{Case-less}}$=ERG$_{\textit{default}}$** **First**, I suggest that unlike *ajin* in Kaqchikel, the aspectual predicate *lanan* in Q'anjob'al (=2) is not a raising predicate and assigns absolutive Case to its embedded nominalized clause, *à la* Coon (2010, 2013): the subject remains Case-less within the embedded clause. This is supported by the fact that *lanan* always bears a null 3rd person singular absolutive morpheme, *regardless* of the person/number of its subject in (2). **Second**, I argue that the suffix *-on* (called *dependent marker*=DM) in (2b) is an independent (absolutive) Case-assigner for the object, following Coon et al. (2011). One of the supporting evidence comes from the striking correlation between *-on* and the Case-need of the object. For example, *-on*, which is independently found in A-bar extraction of ergative subjects in Q'anjob'al (=7b), is absent when the object is a reflexive as seen in (7a).

(7) a. Maktxel max y-il **s-b'a**?
who ASP E3s-see E3s-self
'Who saw herself?'

b. Maktxel max il-**on**-i naq winaq?
who ASP see-DM-ITV CL man
'Who saw the man?' (Coon et al. 2011)

The absence of *–on* in (7a) follows if the object in (7a) is Case-licensed by being (pseudo-)incorporated (Baker 1988; Massam 2001) into the verb under adjacency in the sense of Mithun (1984) as argued by Coon et al (2011), and hence *-on* need not be present to assign Case. In fact, the reflexive object in a declarative sentence must be adjacent to a verb, yielding

VOS order, despite the fact that the basic word order of Q'anjob'al is VSO (Coon et al. 2011). Combining the first argument with the second one, therefore, it is the *subjects* in (2) that must receive default ergative Case because they would be otherwise Case-less. The present analysis can thus predict the variation of ergative alignment simply on the basis of the syntactic properties of aspectual predicates and the transitivity of embedded nominalized clauses.

**4. Predictions**: The present analysis makes interesting predictions about the distribution of the ergative in the two languages when the subject does not require Case: e.g. arbitrary PRO subjects (which involve nominalization of verbs as in (1) and (2)). Assuming that PRO does not require Case (Chomsky 1981), it is predicted that the ergative remains in Kaqchikel since there is still an element (=the object) that must receive default ergative. On the other hand, we expect that the ergative disappears in Q'anjob'al because the object is Case-licensed by *–on*/*oj* and there is no other DP that requires Case. This set of predictions is borne out as shown in (8).

(8) a. ma ütz ta **k**-oqota-x-ïk ch'oy-i'. *Kaqchikel*: **ERG remains**
NEG good NEG E3p-chase-PAS-NOML mouse-PL
'Chasing mice is not good.'

b. maq'-oj unin man watx'-oq *Q'anjob'al*: **No ERG**
hit-DM child NEG good-irr.
'Hitting children is not good.'

In a full paper, I will also discuss the surprising emergence of the ergative in intransitive clauses with a fronted instrumental phrase in Ixil (Mayan). I will argue that this ergative appears only when the assignment of absolutive Case to the intransitive subject fails. I will provide evidence that the fronted instrumental blocks absolutive Case assignment.

**The Problem of Nasal Consonant Epenthesis**

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(1) a. English: *passe**n**ger* "passer-by" (14CE) < OF *passagier* "traveler, passer-by"
b. Bozal Spanish: *Jesu**n**cristo* < *Jesucristo* "Jesus Christ"
c. Korean Kyeongsang dialect: *pwu**n**chwu* < *pwuchwu* "chives"

Optimality theory (Prince & Smolensky 2004) takes advantage of constraint interaction to account for the phonological process. Since the interaction between ONSET and DEP-IO is involved in consonant epenthesis, the only legitimate epenthetic site is onset, and since the language-universal consonant markedness ranking is in effect, cross-linguistically the most frequent epenthetic consonants /t/ and /ʔ/ can be interpreted as the most optimal epenthetic sounds. Nasal consonant epenthesis in (1), therefore, is problematic both in its epenthetic sound (nasal) and in its epenthetic site (coda). Furthermore, the result of nasal consonant epenthesis, i.e., [nasal+voiceless stop] sequences violates the language-universal markedness constraint *NC (Pater 2004).

Several alternative explanations have been proposed to widen the range of explanation for consonant epenthesis. For example, to explain the stem-final epenthesis, Blevins (2008) redefined the legitimate epenthesis site as the edge of prosodic words, or Vennemann (1972) and McCarthy (1993) appeals to the hypercorrection based on rule inversion in order to explain the rare epenthetic sounds including nasals. These efforts, however, is orthogonal to the problem posed by nasal consonant epenthesis since it is a word-medial epenthesis and there is no historical trace to assume a rule for the change.

In this paper, through the survey of 36 languages, I argue that nasal consonant epenthesis is a perceptually-motivated nasality epenthesis. This approach can naturally explain nasal consonant epenthesis, a problematic phenomenon which does not fit into the previous approaches to consonant epenthesis, through phonetic mechanism and perceptual reanalysis. In addition, it can provide the unified explanation to cross-linguistic patterns of nasal consonant epenthesis, not limited to a certain language, and it can explain other two patterns of nasality realization than nasal consonant epenthesis, vowel nasalization and nasal substitution, by grouping together as spontaneous nasalization (henceforth, SN).

In general, SN is described as vowel nasalization induced by certain consonants which are characterized with high air flow, such as affricates, fricatives, and aspirated stops (Matisoff 1975; Ohala 1983). Based on typological data of 36 languages, however, there are three possible realization patterns of emergent nasality without any adjacent nasal segment as a trigger of nasal assimilation: vowel nasalization, nasal substitution, and nasal consonant epenthesis. In addition, such independent nasalization occurs in broader environments including voiced stops and tensed stops. Therefore, I propose the extended concept of SN as hypernasality induced by pressure-sensitive consonants, obstruents. Then, nasal consonant epenthesis is a specific realization pattern of nasality emerged from the extended SN.

The realization pattern of emergent nasality is determined by perceptual interactions with surrounding phonetic environments in the process of finding the place of the newly-created element, nasality. The perceptual strength of emergent nasality becomes salient when it co-occurs with elements having high nasal compatibility on the Nasal Compatibility Hierarchy (Walker 1998). The reason why in previous works SN is defined only as vowel nasalization can be explained by the highest nasal compatibility of vowels. In general situation, anticipatory nasalization on vowels preceding obstruents triggering SN is frequent because it is easier to perceive than carryover nasalization. In the case of SN induced by gutturals (in Semitic sense, including laryngeal and pharyngeal), however, carryover vowel

nasalization is found because perceptually stronger nasality according to high compatibility of gutturals makes possible nasalization on vowels following triggers.

Gutturals highly tend to go through nasal substitution (VC/CV > nasalized V, or C > N). This is because gutturals cannot hold a lead in comparison to emergent nasality in the perceptual process. Fundamentally, gutturals are judged as the most unmarked elements, especially between vowels because of their minimal disruptive influence on the transition from one vowel to the next. The perceptual and articulatory cues of gutturals become weaker with nasality (Baken 1987; Yoon 2012), and at the same time nasality is perceived saliently when it is adjacent to gutturals having high nasal compatibility. Therefore nasal substitution can be understood that gutturals fall behind in the perceptual competition with emergent nasality.

Nasal consonant epenthesis highly tends to occur between vowels and following stops, so the inserted nasals become coda of a syllable followed by stops. Based on the abovementioned correlation between nasality realization patterns and emergent nasality's contextual perceptual strength, it is difficult to understand the reason why nasality becomes an independent consonant before stops with low nasal compatibility, instead of nasalizing one of adjacent vowels as the most optimal position of nasality realization. I assume that in the process of perceptual speech analysis, listeners recognize nasality with place cue of the adjacent stop and interpret it as an independent nasal consonant having its own place information. The scenario starts from the perceptually-weak internal cue to place of nasality (Jun 2004). If nasality is made by perceptual re-analysis in the process of SN, place information of the nasality is intrinsically weaker even than the normal nasality. In this situation, a neighboring obstruent stop having perceptually salient cue to place, prevocalic release burst, causes perceptual place assimilation of nasality. It is supported by the fact that cross-linguistically most data surveyed in this paper show the same place feature between the epenthetic nasals and the following stops. In Korean dialectal data, there are hypercorrected forms where a non-etymological obstruent is inserted after a nasal consonant. The epenthetic obstruents are not results of denasalization because there is no word-medial denasalization in Korean. Therefore these forms are judged as hypercorrection of nasal consonant epenthesis in this study. It is noteworthy that in some hypercorrected forms epenthetic obstruents take different place from trigger nasals, and some words' dialectal forms show variations of obstruents' place as in (2).

(2) a. *twungwuli* > *twung**k**wuli, twung**t**wuli* 'a basket'
b. *phayngi* > *phayng**t**i, phayng**p**i, phayng**k**i* 'top'

References

**Baken, R. J. 1987**. Clinical measurement of speech and voice. Needham Height, MA: Allyn and Bacon. **Blevins, J. 2008**. Consonant epenthesis: natural and unnatural histories. In Jeff, G. (eds.), Language universals and language change, 79-107. Oxford University Press.; **Jun, J. 2004**. Place assimilation. In Bruce, H. et al. (eds.), Phonetically Based Phonology, 58-86. Cambridge University Press.; **Matisoff, J. A. 1975**. Rhinoglottophilia: the mysterious connection between nasality and glottality,. In Ferguson, C.A. et al. (eds.), Nasalfest, 265-287.; **McCarthy, J. 1993**. A Case of Surface Constraint Violation. Canadian Journal of Linguistics 38, 169-195.; **Ohala, J. J. 1983**. The phonological and justifies any means. In Proceedings of the 17th Int. Congr. of Linguists, 232-243.; **Pater, J. 2004**. Austronesian Nasal Subsitution and Other NC Effects. In McCarthy, J.J. (eds.), Optimality Theory in Phonology: A Reader, 271-289. Blackwell.; **Prince, A. and P. Smolensky. 2004**. Optimality theory: Constraint interaction in generative grammar. Blackwell.; **Vennemann, T. 1972**. Rule Inversion. Lingua 29, 209-242.; **Walker, R. 1998**. Nasalization, neutralization and opacity effects. Ph.D. dissertation, USC.; **Yoon, T. J. 2012**. Laryngeal metathesis as

perceptual optimization. Studies in phonetics phonology and morphology, Vol.18, No.3, 413-435.

**Rethinking the Base of Korean Verbal Stems**

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Recent literature on the base of Korean verbal stems argued that the 'base of reanalysis' is the one before A-suffixes (Kang 2006), and provided the supporting evidence by conducting machine learning experiments (Albright & Kang 2008). One of the crucial criterion for base selection argued by Albright (2002) is that it should be informative, that is, the base does not suffer much from the phonological neutralization in order for the speakers to be able to predict the remaining paradigm of the lexeme. The base plays a pivotal role in historical paradigm leveling by replacing non-base alternants with itself.

| | C-suffix, ɨ-suffix, A-suffix | | C-suffix, ɨ-suffix, A-suffix |
|---|---|---|---|
| (1) | *to:p-ko, tou-mjən, tow-asə* | > | *tou-ko, tou-mjən, tow-asə* |
| (2) | *hɨrɨ-ko, hɨrɨ-mjən, hɨll-əsə* | > | *hɨllɨ-ko, hɨll-ɨmjən, hɨll-əsə* |
| (3) | *mu:t-ko, mur-ɨmjən, mul-əsə* | > | *mul-ko, mur-ɨmjən, mul-əsə* |

The examples above, drawn from Kang (2006), have been used for supporting the argument that A-suffixes are the base. It should be noted, however, that the alternations involved do not occur for the sake of harmonizing the phonotactics, but are lexically conditioned. Being relics of the past phonology, whether the alternation takes place cannot be predicted by the "unaltered" allomorph since the regular paradigm such as *cap-ko, cap-ɨmjən, cap-asə* hinders the correct prediction. Therefore, in the case of lexically conditioned alternation, one with the altered allomorph, the informative A-suffixed form serves as a base of reanalysis.

In the case of the alternations induced by the violation of phonotactic constraints, on the other hand, it is the unaltered allomorph that contains more information, and thus, will become the base. But, this is not the case.

| | | | |
|---|---|---|---|
| (4) | *s'ik-ko, s'is-ɨmjən, s'is-əsə* | > | *s'ik-ko, s'ik-ɨmjən, s'is-əsə* |
| (5) | *tam-ko, tam-ɨmjən, tam-ara* | > | *tam-ko, talm-ɨmjən, talm-ara* |

(4) is the data drawn from a dialect which has stem-final consonant neutralization (t→k), and (5) is the example of So (2005) which studies the Hunchun dialect. They show that the abduction is carried out based on the C-suffixed form which involves the alternation – place assimilation and consonant cluster simplification, respectively. These data shows that learners project the paradigm on the basis of neutralized C-suffixed form, which goes across the prediction that have been made on the basis of informativeness.

The base of the paradigms such as (6) and (7) shows the similar aspects. Kang's (2006) claim that the allomorphs before V-suffixes serves as the base in these examples can be a proper description, but the truth beneath the leveling is that, in this case again, the speakers chose the allomorph as their bases at the position in which the phonological alternation could possibly occur: speakers misanalyse the A-suffixed form as the result of certain neutralization processes [(6): ɨ→ø/__V, (7): i→j/__ə], and apply them inversely (Vennemann 1972).

| | | | |
|---|---|---|---|
| (6) | *sə-ko, sə-mjən, sə-sə* | > | *sɨ-ko, sɨ-mjən, sə-sə* |
| (7) | *pjə-ko, pjə-mjən, pjə-sə* | > | *pi-ko, pi-mjən, pjə-sə* |

Then, we can tentatively conclude that in the case of the alternations governed by phonology, the less informative form serves as a base. This seems to be related with the observation made by Kenstowicz (1997) or McCarthy (2005) that a certain kind of constraint

imposing paradigm uniformity is in effect, and this force interacts with other markedness constraints. In other words, at the post-lexical level, the informativeness does not play a role in selecting the bases.

The difference between lexical alternation (1-3) and post-lexical alternation (4-7) seems to support the view that the phonology is separated into several strata (Kiparsky 2000). Whereas in post-lexical strata, a constraint interaction Paradigm Uniformity >> Markedness >> Faithfulness exists, in the strata where lexical idiosyncrasies are marked, probabilistic rules provided by Albright (2002) or morpheme-specific constraints, which is to be disappeared are active to discriminate the altered one from the unaltered one.

It is not so clear, however, of the role of phonotactic constraints in post-lexical level. The paradigms formed by stems with aspirated consonants or consonant clusters never go through the paradigm leveling of this kind. They remain intact as in (8) and (9), which is problematic in the above analysis. These results seem to rely on PU >> F >> M ranking.

(8) hɨt-ko, hɨt$^{h}$-ɨmjən, hɨt$^{h}$-əsə > hɨt-ko, *hɨt-ɨmjən, *hɨt-əsə
(9) mak-ko, malk-ɨmjən, malk-asə > mak-ko, *mak-ɨmjən, *mak-asə

Although the laryngeal neutralization and consonant cluster reduction in coda are clearly post-lexical rules, the neutralized allomorphs do not extend. The difference between (4-7) and (8, 9) may attribute to the speakers' inability to aware the existence of allophonic rules. The changes through (4-7), on the one hand, accompany phonemic alternation of contrasting phonemes which can be easily captured by the speakers, while the changes in (8) and (9), on the other hand, are allophonic change without contrast in that position which is beyond the awareness of the speakers.

The difference between two alternations in post-lexical level seems to correspond rather to the preference for innovative forms than the markedness constraints. The recognizability of the new alternation is the crucial factor distinguishing (4-7) from (8) and (9). The speakers' preference for novel form in language change was once announced by Kiparsky (1968) as Maximum Application Principle. The functional achievement for clinging to new forms is not clear, but this inclination seems to help disambiguate the altered and unaltered stems once the alternation becomes lexical.

<Reference>

Kang, Y. (2006). Neutralizations and variations in Korean verbal paradigms. *Harvard Studies in Korean Linguistics* XI.

Albright, A & Kang, Y. (2008). Predicting innovative alternations in Korean verb paradigms. *The proceedings of the 18th international Congress of Linguistics.*

So, S. (2005). The process of restructuring of stems (2), *Kukeohak* 45.

Vennemann, T. (1972), Rule Inversion, *Lingua* 29.

Kenstowicz, M. (1997), Base-identiy and uniform exponence: alternatives to cyclicity. In J. Duran et al (eds.), *Current Trens in Phonology: Models and Methods*.

McCarthy, J. (2005). Optimal paradigm. In L. Dowing et al. (eds.) *Paradigms in Phonological Theory*.

Kiparsky, P. (2000). Opacity and cyclicity. *The Linguistic Review* 17.

**NPI-Exceptives and Null Arguments: From Subtraction to Addition**

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**Data** In recent studies, phonetically null elements in argument positions have been analyzed as ellipsis in languages like Japanese (cf. Takahashi (2008)). Takita (2011) argues for the ellipsis analysis based on examples like (1), where the antecedent has the NPI exceptive *-sika* 'anything but' and the interpretation of the second sentence can be easily captured by assuming that the null argument ø is derived by eliding *[zibun-no tukut-ta ringo]-sika*, which is identical to the antecedent (intended interpretations are indicated with '< >' in translation). But in contexts like (2), the second sentence can be interpreted as "Bill doesn't eat apples he grows." This reading cannot be derived by ellipsis under identity. Furthermore, in contrastive contexts like (3), where the second sentence is affirmative, the null argument is interpreted as given in translation. So, in spite of the fact that the first sentences in (1)-(3) are identical, the interpretations of the null arguments in the second sentences vary.

(1) John$_2$-wa [zibun$_2$-no tukut-ta ringo]-sika tabe-na-i. Bill$_3$-mo ø tabe-na-i.
-TOP self-GEN grow-PAST apple-anything.but eat-NEG-PRES -also eat-NEG-PRES
'John$_2$ doesn't eat anything but apples he$_2$ grows. Bill$_3$ doesn't eat <anything but apples he$_3$ grows>, either.'

(2) A: John$_2$-wa [zibun$_2$-no tukut-ta ringo]-sika tabe-na-i yo.
-TOP self-GEN grow-PAST apple-anything.but eat-NEG-PRES PART
B: (Oh, I didn't know that.) Bill$_3$-wa zettaini ø tabe-na-i yo.
-TOP absolutely eat-NEG-PRES PART
'A: John$_2$ doesn't eat anything but apples he$_2$ grows. B: Bill$_3$ never eats <apples he$_3$ grows>.'

(3) John$_2$-wa [zibun$_2$-no tukut-ta ringo]-sika tabe-na-i ga, Bill$_3$-wa ø tabe-ru.
-TOP self-GEN grow-PAST apple-anything.but eat-NEG-PRES but -TOP eat-PRES
'John$_2$ doesn't eat anything but apples he$_2$ grows, but Bill$_3$ eats <other things (e.g. other fruits) as well as apples he$_3$ grows>.'

**Puzzle** Suppose NPIs are interpreted as existential in non-downward-entailing contexts. Then, under the ellipsis approach, the null argument in (3) should be interpreted as something like **something but apples he grows*, which does not satisfy the Leastness of the truth conditions of *but*-exceptive sentences proposed by von Fintel (1993) (see (4a) below). And more importantly, what we need for the interpretation of the second sentence in (3) is addition like *some fruits and/as well as apples Bill grows* rather than subtraction like *any fruits but/minus apples Bill grows*. The question is how we can derive addition from subtraction.

**The semantics of the first sentence in (1)-(3)** The LF representation of the NPI exceptive expression *sika* is given in (5), and I assume that the truth conditions of the *sika*-sentence are the same as those with the *but*-exceptive in (4a). The $\llcorner_{NPI}$ under scope of negation is equivalent to negative quantifier *no*, so the LF structure of the first sentences in (1)-(3) roughly looks like (4b), where 'fruit' is contextually given. With (4a), Gajewski (2008) proposes that exceptive sentences have covert focus operator LEAST targeting the complement of *but* (the complement of *-sika* in our examples), defined in (6), where <B, X> is a structured meaning representation of focus; B is background, and X focused. The LF of the first sentences in (1)-(3) is then represented as in (7a), where the existentially quantified

object containing the focused element moves to VP by QR. The XP in (7a) is mapped to focus representation (7b), which is combined with LEAST, yielding (7c).

**Proposal** I assume following Tomioka (2003) that null arguments denote contextually salient properties. In our examples, it is reasonable to assume that the set of 'apples x grows' is salient. The reading of the second sentence in (2) immediately follows from this, as in (8) (wavy lines indicate salient properties in given contexts). It is equally reasonable to assume that the set of 'fruits' minus 'apples that x grows' is also salient. In (3), the null argument denotes this property (= Q in (10)). I would like to propose that this property is associated with covert EVEN, defined in (9), as shown in (10a) (cf. Chierchia (2013) among others). The alternative set ALT contains 'fruits which are not apples Bill grows' (= Q) and 'apples that Bill grows', as in (10c). So, the second sentence of (3) is roughly paraphrased as 'Bill eats even some fruits which are not apples he grows.' The additive reading is thus derived. Now, interestingly, the same method can apply to the second sentence in (1) as in (11a-c), where the sentence has LEAST, like the first sentence, and the salient property denoted by the null argument is the same as the one in (3), namely [fruits – [apples x grows]].

**Conclusion** The additive reading in the second sentence of (3) is induced by covert EVEN, so the puzzle is solved. More importantly, the interpretive variability in (1)-(3) is accounted for in the uniform fashion: null arguments denote (existentially closed) salient properties, some of which are targeted by covert focus operators. This suggests that no ellipsis analysis be necessary for null arguments anteceded by *NP-sika*.

(4) a. [D A [but C]] P = true iff $\underbrace{P \in D(A–C)}_{\text{Domain Subtraction}}$ & $\underbrace{\forall S(P \in D(A–S) \rightarrow C \subseteq S)}_{\text{Leastness}}$

b. LF: [no fruit [but apples he grows]] John eats;
D = no, A = fruit, C = apples he grows, P = John eats

(5) LF: β-*sika* ~~> $\exists_{NPI}[\alpha – \beta]$, where α is contextually given.

(6) LEAST(<B, X>) = 1 iff B(X) = 1 & S[B(S) = 1 → X ⊆ S]

(7) a. LF: [LEAST [$_{XP}$ not John$_2$ [ $\exists_{NPI}$[fruit – [apple he$_2$ grows]$_F$]]$_5$ [$t_2$ eats $t_5$]]$_{XP}$]

b. XP ~~> <λP.NO(fruit – P)(John eats), λy[apple(y) & grow(y)(j)]>

c. NO(fruit – λy[apple(y) & grow(y)(j)])(John eats) = 1 &
∀S[NO(fruit – S)(John eats) = 1 → λy[apple(y) & grow(y)(j)] ⊆ S]

(8) 2nd sentence of (2): $\exists$y[apple(y) & grow(y)(b) & ¬eat(y)(b)]

(9) EVEN(<B, X>) = 1 iff B(X) = 1 & ∀S∈ALT[B(S) = 1 & X ≠ S → B(X) $\leq_c$ B(S)]

(10) 2nd sentence of (3): salient property Q = λx[fruit(x)] – λx[apple(x) & grow(x)(b)]

a. LF: [EVEN [$_{XP}$ Bill$_3$ [ $\exists$ [Q]$_F$]$_6$ [$t_3$ eats $t_6$]] $_{XP}$]

b. XP ~~> <λP $\exists$y[P(y) & eat(y)(b)], Q>

c. ALT = {Q, λx[apple(x) & grow(x)(b)]}

d. $\exists$y[y ∈ Q & eat(y)(b)] = 1 & ∀S∈ALT[ $\exists$y[y ∈ S & eat(y)(b)] = 1 & Q ≠ S
→ $\exists$y[y ∈ Q & eat(y)(b)] $\leq_c$ $\exists$y[y ∈ S & eat(y)(b)]]

(11) 2nd sentence of (1): salient property Q = λx[fruit(x)] – λx[apple(x) & grow(x)(b)]

a. LF: [LEAST [$_{XP}$ not Bill$_3$ [ $\exists$ [Q]$_F$]$_6$ [$t_3$ eats $t_6$]]$_{XP}$]

b. XP ~~> < λP¬ $\exists$y[P(y) & eat(y)(b)], Q>

c. ¬ $\exists$y[y ∈ Q & eat(y)(b)] = 1 & ∀S[¬ $\exists$y[y ∈ S & eat(y)(b)] = 1 → Q ⊆S]

**References** Chierchia, G. 2013. *Logic in grammar*. Oxford University Press. • Gajewski, J. 2008. NPI *any* and connected exceptive phrases. *NLS*16: 69-110. • von Fintel, K. 1993. Exceptive constructions. *NLS* 1: 123-148. • Takahashi, D. 2008. Quantificational null objects and argument ellipsis. *LI* 39: 307-326. • Takita, K. 2011. An argument for argument ellipsis from -*sika* NPIs. *NELS* 39, 771-784. • Tomioka, S. 2003. The semantics of Japanese null pronouns and its cross-linguistic implications. In *The interfaces,* 321–339, John Benjamins.

**How Unanswerable Questions Turn into Answerable**

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It is well known that clausal pied-piping has been observed overtly in Basque and Imbabura Quechua. However, the phenomenon is limited to subordinate clauses. In this talk I would like to show that the matrix clause itself can be pied-piped in quantity *wh*-questions in Sinhalese and Japanese, which I call ultimate pied-piping. In Sinhalese, ordinary *wh*-questions are normally formed by placing a question particle, *də*, next to a *wh*-expression and making a special verbal marking, *e*-ending as in 0*a* and 0*a*. Moreover, as in (1)*b*, *də* normally cannot be used as a verbal marking instead of *e*. However, quantity *wh*-expressions are exceptional in that *də* can be placed at the end of a sentence instead of *e*-ending as in (1)*b*.

I will claim that *də* delimits what goes through covert *wh*-movement in Sinhalese. For example, in the case of (1)*b*, the matrix clause itself, specifically TP, is raised to C-spec, resulting in a structure such as (3)*a*. Accordingly, the restriction and the scope of the *wh*-operator match in the semantic component as in (3)*b*, which leads to gibberish with ordinary *wh*-expressions because since the restriction (i.e. the pied-piped phrase) is presupposed according to Strawson (1952), a set of <u>true</u> propositions, approximate to *Chitra bought everything*, will be presented to the listener, which has no information-seeking function, and hence, gibberish as a question. In other words, for an ordinary *wh*-question to be answerable, it must represent a set of unvalued propositions; therefore, ultimate pied-piping is unacceptable in ordinary *wh*-questions whether it is overt or covert.

In contrast, quantity *wh*-expressions allow ultimate pied-piping as in (4)*a*. The semantic representation, (4)*b*, provides a set of <u>true</u> propositions as in (3)*b*. However, the representation is legitimate as an information-seeking question because the listener has a job of counting the number of true propositions, and expresses the number as an answer.

The account above has a few pieces of evidence. First, *də* can be placed clause-finally with any *wh*-expression (except *mokə* 'why') if it is an embedded question and the matrix verb is presuppositional such as *dannəwa* 'know' and *hoya bərənəwa* 'examine' as in (5). If the present account is correct, the whole embedded clause in (5)*b* goes through ultimate pied-piping. These facts are naturally accounted for because embedded questions themselves do not have information-seeking function, so a set of true propositions does not cause a problem there. Furthermore, such sets are only compatible with factive verbs, whose embedded clauses are presupposed to contain only true propositions.

The intervention effect in Japanese and Sinhalese presents more evidence. As represented in (6), certain phrases (called interveners and underlined in the examples), such as *dare.mo* 'everyone' in Japanese and *karu.t* 'everyone' in Sinhalese, cannot c-command a *wh*-expression as in (7)*a* and (8)*a*, which is attributed to the economy condition: C is a probe and it goes into Agree with an intervener rather than a *wh*-expression because the former is closer to C. However, 'how many NP' does not cause the effect as in (7)*b*, which is not surprising because the entire clause can be raised with such a quantity *wh*-expression. Sinhalese examples show clearer evidence as in (8). If *də* is placed after the verb, the intervention effect is unobserved as in (8)*b*, which is due to ultimate pied-piping. In addition, the fact that (7)*b* cannot be answered with *zero-satu* 'none' further supports Strawson (1952) in that the restriction of the *wh*-operator is presupposed (i.e. 'everyone read some book(s)'). (Independently, the present argument accounts for why the intervention effect is unobserved in embedded context as in (9) because the whole embedded clause can go through *wh*-movement to its own C-spec.)

Nevertheless, Sinhalese displays an opposite phenomenon to Japanese: (2)*a* cannot be answered with 'no one' while (2)*b* (and (8)*b*) can. To account for the contrast, I will claim that *də* in Sinhalese *wh*-questions also marks information focus, so that it adds a cleft-like interpretation as noted in Sumangala (1992), which is shown in the second English translations of (1)*a* and (2)*a*. Due to the cleft interpretation in (2)*a*, the presupposition that someone read the book is more strongly felt by Sinhalese speakers than that of (2)*b*, and hence, the opposite effect from Japanese is observed. Similarly in (2)*a*, because *də* is attached to the main clause, it is interpreted as new, hence, unpresupposable information, so it cancels the presupposition of the restriction, and can be answered with 'no one'. Accordingly, the different result between the two languages does not refute ultimate pied-piping in Sinhalese.

(1) a. Chitra monəwa **də** gatt-**e**?
what Q bought-E
'What did Chitra buy?' or 'What is it that Chitra bought?'
b. *Chitra monəwa gatt **də**?
what bought Q
'What did Chitra buy?' Kishimoto (2005, adapted)

(2) a. kiidenek **də** potə kieuw-**e**?
how.many Q book read-E
'How many people read the book?' or 'How many people are there who read the book?'
b. kiidenek potə kieuwa **də**?
how.many book read Q
'How many people read the book?' Kishimoto (2005, adapted)

(3) a. [$_{CP}$ [$_{TP}$ Chitra bought what]-*də* C [$_{TP}$ Chitra bought what]-*də*]
b. λp∃x[Chitra bought thing(x) & p = ^Chitra bought x]

(4) a. [$_{CP}$ [$_{TP}$ people read how many books]-*də* C [$_{TP}$ people read how many books]-*də*]
b. [λp∃n∃$^{n}$x [number(n) & people read book(x) & p = ^people read x]] (∃$^{n}$x indicates that there are n-number of x's.)

(5) a. Ranjit [kau **də** aaw-**e** kiyəla] dannəwa.
who-Q came-E that know
b. Ranjit [kauru aawa **də** kiyəla] dannəwa.
who came Q that know
'Ranjit knows who came.' Kishimoto (1997)

(6) The intervention effect: *[C … intervener … *wh*]

(7) a. *<u>dare.mo-ga</u> nani-o yomimasita ka?
everyone-Nom what-Acc read Q
'What did everyone read?'
b. <u>dare.mo-ga</u> nansatu-no hon-o yomimasita ka?
everyone-Nom how.many-Gen book-Acc read Q
'How many books did everyone read?'

(8) a. *<u>kauru.t</u> kiiyak pot$^{h}$ **də** kieuw-**e**?
everyone how.many book Q read-E
b. <u>kauru.t</u> kiiyak pot$^{h}$ kieuwa **də**?
everyone how.many book read Q
'How many books did everyone read?'

(9) Mary-wa [$_{CP}$ <u>dare.mo-ga</u> nani-o yonda ka] sitteiru.
-Top everyone-Nom what-Acc read Q know
'Mary knows what everyone read.'

**Reference**

Kishimoto, Hideki (1997). "Wh-in-situ and null operator movement in Sinhala questions," ms., Hyogo University of Teacher Education.

Kishimoto, H. (2005) "*WH*-IN-SITU and Movement in Sinhala Questions," *NLLT* 23: 1-51.

Strawson, P. F. (1952). Introduction to Logical Theory, Methuen, London.

Sumangala, L. (1992) *Long-distance dependencies in Sinhala: The syntax of focus and WH questions*, doctoral dissertation, Cornell University.

**On the Scope of Negation in Japanese: Evidence from Kumamoto Dialect**

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**1. Puzzle:** We tackle a longstanding puzzle concerning negation in Japanese, namely whether or not the spec of TP is under its scope. The central question here is how the subject may be interpreted differently under negation, as in (1).

(1) a. Zen'in-ga siken-o uke-nakat-ta. *not>all, all>not
all-NOM test-ACC take-NEG-PAST
'All did not take the test.'
b. Siken-o zen'in-ga uke-nakat-ta. not>all, all>not
test-ACC all-NOM take-NEG-PAST
'The test all did not take.'

Miyagawa (2001) assumes that the scope of negation is the c-command domain of T and develops his theory of scrambling based on [EPP]. Accordingly, if the subject moves to the spec of TP to check [EPP] on T, as in (2a), it is not in the c-command domain of negation and the total negation of the universal quantifier (UQ) (all>not) is obtained. But if the object instead moves to check [EPP] on T, as in (2b), the subject can stay in vP, which is under the scope of negation, and the partial negation of the UQ (not>all) results.

(2) a. ([$_{TP}$ Obj$_j$)[$_{TP}$ Subj$_i$ …**[$_{NegP}$ [$_{vP}$ $t_i$ …$t_{V\text{-}v}$] $t_{V\text{-}v\text{-}Neg}$]** V-v-Neg-T$_{[EPP]}$](])
b. [$_{TP}$ Obj$_i$ …**[$_{NegP}$ [$_{vP}$ Subj …$t_i$ …$t_{V\text{-}v}$] $t_{V\text{-}v\text{-}Neg}$]** V-v-Neg-T$_{[EPP]}$]

On the other hand, Saito (2010) argues that TP should be under the scope of negation on the basis of English data such as the translation of (1a), thereby assuming PredP above TP and the movement to the spec of PredP, which is out of the scope of negation. (3a) represents the structure for total negation of the subject UQ, where the subject is out of the scope of negation, and (3b) represents the structure for partial negation of the subject UQ, where the subject is supposed to be under the scope of negation.

(3) a. ([$_{PredP}$ Obj$_j$)[$_{PredP}$ Subj$_i$ **[$_{TP}$ $t'_i$ [$_{NegP}$ [$_{vP}$ $t_i$ …($t_j$)…V-v]Neg]T]**Pred](])
b. [$_{PredP}$ Obj$_j$ **[$_{TP}$ $t'_j$ [$_{TP}$ Subj$_i$ [$_{NegP}$ [$_{vP}$ $t_i$ …$t_j$ …V-v]Neg]T]**Pred]

After pointing out empirical problems of both analyses, we unravel the puzzle, using new data from the Kumamoto dialect (KD) spoken in Kyushu, south-western Japan and derive an intriguing conclusion that Miyagawa's EPP based analysis is wrong but also the spec of TP is not included in the scope of negation in Japanese against Saito's claim.

**2. Nominative case-markers in KD:** KD is unique in that it uses two nominative case markers '-ga' and '-no' where only '-ga' is used in standard Japanese (SJ).

(4) a. Tenki-ga/*-no ii-ne. (SJ)
Weather-NOM fine-PRT
'Nice weather, isn't it?'
b. Tenki-ga/-no yoka-ne. (KD)
Weather-NOM fine-PRT
'Nice weather, isn't it?'

We support the generalization in (5) suggested by Kato (2007) and argue that KD exhibits the positions of the subject overtly, as opposed to SJ, in which this is not clear.

(5) A nominative subject in KD is expressed by the case-marker '-no' if it is inside vP and by '-ga' if it is outside vP, while that in SJ is expressed by '-ga' regardless of whether it is inside or outside vP.

Assuming that the nominative subject '-ga' has three usages in (6) in SJ, in place of the generally assumed exhaustive listing and neutral description usages (Kuno (1973)), we demonstrate that KD uses '-ga' for (6a, b) and '-no' for (6c), as exemplified in (7)-(9).

(6) a. Exhaustive listing or focus
b. Topic about which an action or event is expressed
c. Neither focus nor topic in thetic sentences (cf. Kuroda (1992), Erteschik-Shir (2007))

(7) a. Saru-ga ningen-no senzo desu. ((6a) in SJ)
monkey-NOM man-GEN ancestor is
'It is the monkey that is the ancestor of man.'
b. Saru-ga/*no ningen-no senzo (desu) tai. ((6a) in KD)
monkey-NOM man-GEN ancestor is Prt
'It is the monkey that is the ancestor of man.'

(8) a. John-ga ittushyookenmei hatarai-ta ((6b) in SJ)
b. John-ga/*no ittushyookenmei hatarai-ta (tai). ((6b) in KD)
John-NOM hard work-PAST (Prt)
'John worked hard.'

(9) a. Tsukue-no ue-ni hon-ga aru. ((6c) in SJ)
desk-GEN top-on book-NOM is
'There is a book on the desk.'
b. Tsukue-no ue-ni hon-no/*ga aru (tai). ((6c) in KD)
desk-GEN top-on book-NOM is (Prt)
'There is a book on the desk.'

In feature terms, (6) is represented as in (10).

(10) a. (6a), (6b): [nominative], [topic/focus] → '-ga' subject both in KD and SJ
b. (6c): [nominative] → '-no' subject in KD, '-ga' subject in SJ

**3. Analysis:** We demonstrate that the correspondence of the syntactic positions and the interpretations in (5) and (6) is naturally captured in the framework of Miyagawa (2010). Miyagawa argues that discourse-configurational languages such as Japanese have an Agree system based on [topic/focus] feature with the feature-inheritance mechanism from C to T in parallel with the proposal by Chomsky (2007, 2008) for languages with ϕ features agreement, as illustrated in (12) for (11).

(11) a. Taroo-ga piza-o tabe-ta. (SJ)
Taroo-NOM pizza-ACC eat-PAST
'Taro ate pizza.'
b. Piza-$o_i$ Taroo-ga $t_i$ tabe-ta. (SJ)
pizza-ACC Taroo-NOM eat-PAST

(12) a. [[$_{TP}$ Taroo-ga$_{[topic/focus]}$ [$_{vP}$ (Taroo-ga$_{[topic/focus]}$) [$_{VP}$ pizza-o tabe]]ta] C $_{[topic/focus]}$ ]
move inheritance

b. [[$_{TP}$ pizza-o$_{[topic/focus]}$ [$_{vP}$ Taroo-ga [$_{VP}$ (pizza-o$_{[topic/focus]}$) tabe]]ta] C $_{[topic/focus]}$ ]
move inheritance

This system explains the contrast in (13), as in (12): the subject with [topic/focus] (i.e. '-ga' in KD) has moved to [Spec, TP] in (13a), while the object with [topic/focus] has moved to [Spec, TP], leaving the subject without [topic/focus] (i.e. '-no' in KD) in situ in vP in (13b).

(13) a. Taroo-ga/*no son shoosetu-ba koo-ta-bai. (KD)
Taroo-NOM the novel-ACC buy-PAST-PRT
'Taroo bought the novel.'

b. Son shoosetu-ba Taroo-no koo-ta-bai. (KD)
the novel-ACC Taroo-NOM buy-PAST-PRT

Finally we demonstrate that the data in KD reveals the scope of negation in Japanese and conclude that [Spec, TP] is out of the scope of negation.

(14) a. Zen'in-ga/*no siken-ba uke-n-datta. (KD) *not>all, all>not (cf. (1a))
all-NOM test-ACC take-NEG-PAST
'All did not take the test.'

b. Siken-ba zen'in-no uke-n-datta. (KD) not>all, *all>not (cf. (1b))

c. Siken-ba zen'in-ga uke-n-datta. (KD) *not>all, all>not (cf. (1b))

**Selected References: Chomsky, N.** (2007) "Approaching UG from Below." *Interfaces + Recursion =Language?*, 1-29, Mouton de Gruyter. **Chomsky, N.** (2008) "On Phases," *Foundational Issues in Linguistic Theory*,133-166, MIT Press. **Erteschik-Shir, N.**(2007) *Information Structure: The Syntax-Discourse Interface*, Oxford University Press. **Kato, S.** (2007) "Scrambling and the EPP in Japanese: From the Viewpoint of the Kumamoto Dialect in Japanese," *Formal Approaches to Japanese Linguistics: Proceedings of FAJL* 4, 113-124. **Kuno, S.** (1973) *The Structure of the Japanese Language*, MIT Press. **Kuroda, S-Y** (1992) "Judgment Forms and Sentence Forms," *Japanese Syntax and Semantics: Collected Papers*, 13-77, Kluwert. **Miyagawa, S.** (2001) "The EPP, Scrambling, and *Wh*-in-Situ," *Ken Hale: A Life in Language*, 293-338, MIT Press. **Miyagawa, S.** (2010) *Why Agree? Why Move?: Unifying Agreement-Based and Discourse- Configurational Languages*, MIT Press. **Saito, M.** (2010) "Semantic and Discourse Interpretation of the Japanese Left Periphery," *The Sound Patterns of Syntax*, 140-173, Oxford Univ. Press.

**Resumptive Pronouns of Degree in Clausal *Yorimo*(than)-Comparatives**

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**1. Issue:** Japanese clausal *yorimo*(than)-comparatives have attracted wide attention. There are at least four types of analyses of *yorimo*-clauses: Beck et al.'s (2004) free relative analysis, Kennedy's (2007) phrasal analysis, Shimoyama's (2012) application of conventional analyses of 'than'-clauses, and Sudo's (2009, to app.) degree nominal analysis. I will present a piece of novel data that is correctly captured by Sudo's degree nominal analysis, which provides an additional empirical difference among the existing analyses.

**2. Data:** Relevant data is predicative clausal *yorimo*-clauses with a demostrative pronoun of degree in an island. Good examples are hard to find, but (1) and (2) are somewhat acceptable, where ***sore-gurai*** 'that degree' and ***sore*** 'that' refer to the number of audience and parents' income, respectively. Importantly, they do NOT have to refer to a degree in the context. One possible meaning of (1) is "….more than **the number s.t.** it would be….if **that number** of people came." (2) has a simialr meaning as well.

(1)(Organizers were worried how many people would come to Prof. Tanaka's talk. However,)
(?) Tyoosyuu-no kazu-wa [[**sore-gurai**-no hito-ga kure-ba] yoi darou
audience-Gen number-Top [[**that-degree**-Gen people-Nom come-if] nice would
to kitaisiteita]-yorimo harukani ookatta.
that were.hoping]-than far was.more
Lit. 'The number of audience was far more than [(the organizers) were hoping that it would be nice [if **that number** of people came]].'
(The number of audience was far more than **the number s.t.** the organizers were hoping that it would be nice if **that number** of people came.)

(2) (Hanako wanted to apply for a scholarship. However,)
(?) Oya-no syuunyuu-ga [[ **sore** yori ooi hito]-wa moosiko-me-nai-to
parent-Gen income-Nom [[ **that** than larger person]-Top apply-can-Neg-that
kaitearu]-yorimo ookatta node akirameta.
written]-than was.larger because gave.up
Lit. 'She gave up because (her) parents' income was larger than [it is written that [a person (whose parents' income is) larger than **that**] cannot apply].'
(' ……larger than **the amount s.t.** ….a person….income is larger than **that amont** …...)

**3. Hidden degree nominals by Sudo (2009, to app.):** Sudo argues that *yorimo*-clauses of predicative *yorimo*-comparatives have hidden degree nominals that are syntaxitcally NP but semantically <d,t>. In (3), *kasikosa* 'smartness' can optionally appear without changing the meaning of the sentence. Thus the *yorimo*-clause is rather a relative clause that modifies the (hidden) degree nominal.

(3) John-wa [[Mary-ga kitaishita] (**kasikosa**)]-yorimo (motto) kasikoi.
John-Top [[Mary-Nom expected] (**smartness)**]-than (more) smart
'John is smarter than [(**the smartness**) [Mary expected]].'

Under Sudo's degree nominal analysis, (1)(2) are a natural outcome: The pronouns in the islands are **resumptive pronouns of degrees** that are co-indexed with the (hidden) head degree nominals, as shown in (4)(5).

(4) (?) Tyoosyuu-no kazu-wa [[[**sore-gurai**$_i$-no hito-ga kure-ba]
audience-Gen number-Top [[[**that-degree**-Gen people-Nom come-if]
yoi darou to kitaisiteita] (**kazu**$_i$/**oosa**$_i$))]-yorimo harukani
nice would that were.hoping] (**number/largeness**)]-than far
ookatta.
was.more
Lit. 'The number of audience was far larger than [(**the number**$_i$/**the largeness**$_i$) [(the organizers) were hoping that it would be nice [if **that number**$_i$ of people came]]].'

(5) (?) Oya-no yuunyuu-ga [[[ **sore**$_i$ yori ooi hito]-wa moosiko-me-nai-to
parent-Gen income-Nom [[[ **that** than larger person]-Top apply-can-Neg-that
kaitearu] (**gaku**$_i$/**oosa**$_i$)]-yorimo ookatta node akirameta.
written] (**amount/largeness**)]-than was.larger because gave.up
Lit. 'She gave up because (her) parents' income was larger than[(**the amount**$_i$/ **the largeness**$_i$) [it is written that [a person (whose parents' income is) larger than **that**$_i$] cannot apply]].'

This explains the above mentioned meanings of (1)(2). It also explains the slightly deviant status of the data. Boeckx 2003 reports that data with resumptive pronouns are slightly deviant across languages.

**4. Other analyses:** Other analyses fail to predict (1)(2). It is difficult to apply **conventional analyses** of clausal 'than'-comparatives to (1)(2). Abel (2010) points out that no significant data of resumptive pronouns in 'than'-clauses is found cross-linguistically. Abel refers to Sharvit (1999) to account for the fact. **Beck et al.'s (2004) free relative analysis** of *yorimo*-clause also fails to predict (1)(2). They analyze *yorimo*-clauses as a set of individuals, under which only resumptive pronouns of individual arguments might be possible. Crucially, resumptive pronouns of degree are not compatible with their analysis, because there is no degree operator that would bind them. **Kennedy's (2007) phrasal analysis** assumes that the complement of *yorimo* is always type <e>. In other words, *yorimo*-clauses are phrases in disguise. His analysis also fails to predict (1)(2) for the same reasons as Beck et al.'s. Note that the degree nominals are NOT type <e,t>, as they clearly have scalar property. It is often morphologically obvious that they are derived from degree predicates, whose properties are carried overt to the derived nominals. E.g., *Ookisa* 'largeness' is derived from *ookii* 'large.' In short, Sudo's hidden degree nominal analysis correctly predicts the resumptive pronouns of degree in (1)(2), while other existing analyses don't, at least in a straightforward manner.

**Selected references:** Abel(2012) *Phases: An essay on cyclicity in syntax.*::Beck et al.(2004) Parametric variation in the semantics of comparison: Japanese vs. English. *JEAL*13. :: Boeckx(2003) *Islands and chains*. ::Kennedy(2007) Modes of Comparison. *CLS*43. :: Ms. ::Shimoyama(2012) Reassessing Crosslinguistic Variation in Clausal Comparatives. *NALS*20. ::Sudo(to app.)Hidden Nominal Structures in Japanese Clausal Comparative. *JEAL*.

**Agreement of a Point-of-Viewer and a Jussive Subject**

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***Issue***: Zanuttini, Pak, and Portner (2012: ZPP) propose that the functional head Jussive (JH) brings various directive meanings w.r.t. a person feature ([pers]) on it: Promissive *-ma* [1]; Imperative *-la* [2]; Exhortative *-ca* [1⊕2] in Korean. ZPP show that JH restricts a subject through Agree b/w the subject and JH (S/JH-Agree). Furthermore, ZPP argue that S/JH-Agree is obligatory in Korean unlike T-agreement languages like Italian to explain the contrast that JH and subject *must* share an identical [pers] in Kor., but not in It.: (2), which is ungrammatical, cannot have the meaning like (1). However, Kor. is not simple as in (3).

(1) Signor Rossi, che nessuno si sieda in prima fila! [It.]
Mr. R. that no.one self sit in first row (ZPP:1250, adapted)
'Literally: 'Mr. Rossi, (see to it that) nobody sit in the first row.'

(2) *Rossi kwun$_i$, amwuto$_j$ aphcwul-ey ancci ma-**la**! (*j* does not include *i*.) [Kor.]
R. Mr. no.one front.row-in sit not(DEONTIC)-**IMP**

(3) Nay/Ne-ka Hawaii-ey ka-**ca**. [Kor.]
I-NOM/you-NOM H.-to go-**EXH**
'(lit.) Let's me/you go to Hawaii.'

***Puzzle***: S/JH-Agree *seems* not to be involved in (3) at a glance; the Agent does not exactly conform to the [pers] of *-ca*. If S/JH-Agree is obligatory in Kor., the singular pronominal subject should have been blocked. Nonetheless, if we assume that S/JH-Agree can be blocked in (3) as It., (2) becomes problematic. Furthermore, in line with ZPP, when S/JH-Agree is blocked, non-core meaning of Jussives is yielded as in (1): '*see to it that…*', but (3) does not have such reading. The intuition of asking addressee's permission in (3) is a part of core reading of Exh. Moreover, in fact, non-core reading is possible even in Kor. When an overt 3rd person entity *kuney-ka* is presented in an embedded J(ussive) C(lause) as (4), it and its bound variable fail to get [pers: 2], and a non-addressee subject can be ordered indirectly. If S/JH-Agree is prohibited in an embedded JC due to *subjunctive* embedded T, it will be interpreted in the same way as Italian in (2) naturally.

(4) Jane-i Mary$_i$-eykey [kuney **?i/?arb**-ka
J.-NOM M.-DAT she-NOM
{*kunye* (casin)$_{[-2]}$ **?i/?arb** /**ne* (casin)$_{[2]i/arb}$-uy} cip-e ka-***la***$_{[2]}$]-ko
she.(self)/you.(self)-GEN home-to go-***IMP***-COMP
myenglyengha-yess-ta
order-PST-DEC
'(Int.) Jane ordered Mary that {she/the other girl} go to the house of herself.'

However, (3) is not construed as (4): both author and addressee participate in ordering the action to be performed by the part of them in (3). If we ascribe the contrast b/w (3) and (4) solely to S/JH-Agree, the meaning of (3) and its subject realization will remain to be mystery.
***Solution***: We find the solution to the seemingly non-Agreement data (3) in Kor. from the nature of [pers] on JH.

(5) Proposal:
i) A person feature of JH refers to a Point-of-Viewer of To-do-list (POV).
ii) Subjects of JC correspond to the Updater of the To-do List in JH

(5) implies that the identity of Updater and POV is not the inherent nature contra Portner (2007) which argues that To-do List *must* be defined in terms of [pers] in JH such as '[pers](Uptater)'s action based on deontic, bouletic or teleological modal base attributed to [pers](POV). However, (5) still can explain why Updater and POV are *usually* identical in Korean as (2): due to the obligatory S/JH-Agree in matrix JCs, the subject must share the [pers] in [JH]. Furthermore, there is cross-linguistic evidence of POV feature of JC: Imp particles in Badiotto (an Italian dialect) in (6) discussed in Poletto and Zanuttini (2003: P&Z).

(6) a. Tète ma n dé de vacanza!
take-yourself *ma* a day of vacation (2nd sg)
'Take a day off for vacation!'
b. Arjigneme mo cà le bagn!
prepare-me *mo* here the bath
'Get my bath ready!' (P&Z: 4-5)

P&Z consider *ma* and *mo* as a POV marker even though the Updater is fixed as addressee: *ma* – permission for the benefit of the *addressee*; *mo* – order for the benefits of *author*. And this kind of semantics is compatible with (3) where the POV and the Updater are not strictly identical yielding a special meaning. Thus, although Portner (2008) argues that *ma* and *mo* can be defined in terms of [2]'s POV such as (i) *ma* indicates the bouletic/teleological To-do-list of addressee's and (ii) *mo* the deontic one of addressee's maintaining the concept that To-do-list *must* be defined by the [pers] in it, such an idea cannot explain the unique property of (3). In this line of reasoning, we assume that the [pers] of JH in Kor. corresponds to POV, not the Updater of the To-do list directly as shown in (7).

(7) a. -*ma*: the benefits/obligation of *author* [1]
b. -*la*: the obligation of *addressee* [2]
c. -*ca* : the obligation/benefit of *author* and *addressee* both [1⊕2]

***Analysis I***: i) Obligatory Agreement, Matrix JC (2): the POV-person feature of JH [2] has to Agree with the subject *amwuto* for (2) to be grammatical. In that case, the subject, in turn, can bind the 2nd person pronoun *ne-uy* 'your' insofar as it is semantically appropriate. However, if *amwuto* excludes the addressee like It. (1), it must be ungrammatical unlike (1). ii) Non-Agreement environment, Embedded JC (4): due to the lack of S/JH Agree, JH -*la* cannot pass [2] onto the embedded subject *kunye-ka* 'she', and it just marks POV only: the obligation of addressee. The embedded subject with inherent [pers: 3] and [fem] features updates her To-do List independently, and the 2nd person bound pronoun cannot appear in (4).
***Analysis II***: in (3), how can the singular subject occur with the Exh -*ca* marker bearing [1⊕2] despite being under the S/JH-Agreement environment? Note that the feature composition of -*ca* does not include [*i*Number: plural]; ZPP (p.1249) describe it as the sum of [1] and [2]: [1⊕2]. Plus, we assume (8).

(8) Partial Agreement of POVs: a subset of (plural) POVs can participate in the S/JH-Agreement which licenses the Updater of the To-do List

The transmitted [pers] (Updater) can be just a single member of plural POVs; [1], [2], and [1⊕2] can be transmitted via S/JH-Agree. Combining (5) and (8), then we can draw the

cooperative sense of (3) that both author and addressee take part in the ordering process, though a single Agent carries out the order. That is, the POV-feature on *-ca* is [1⊕2], but only one of them S/JH-Agrees with the subject. Hence, Updater can be singular even in Exh.
***Further Evidence***: even though an Exh particle like *-ca* is rare in other languages, we can find special interpretation of Exh constructions in other languages as well.

(9) Let's take a medicine. (Spoken from a nurse to a patient)

In (9), the POV of *let's* is [1⊕2], but the covert subject is [2] only, as (3). Furthermore, *let's* is used as a mere grammatical particle for Jussives as in (10).

(10) a. Let's give you a hand. (1st person Imp) (Krug 2004 from Mastop 2005)
b. Let's you go first, then if we have any money left I'll go. (2nd person Imp)
c. Let's people know that teachers work in the vacation. (3rd person Imp)

Here, *let's* contains [1⊕2], but it allows all the personal subjects. The [1⊕2] functions as POV only, and its part is read as an Updater. In Eng., T-Agreement allows (10c) contra Kor. Moreover, in addition to the partial S/JH-Agree in (8), the partial POV representation seems to be possible. *Pö* signals that an expressed proposition contradicts the discourse (see P&Z).

(11) L mangiun pö *(ma)! (Badiotto, P&Z: 7 with adaptations)
it eat (1st pl) *pö* *ma*
'Let's eat it.'

Under the Imp circumstances, it means that the order conflicts with hearer/speaker's planning/willingness. In (11), the Updater is both speaker and hearer in accordance with the verbal morphology, but POV cannot be [1⊕2] since nobody gets benefited from the ordered action. Thus addition of *ma* is necessary anchoring the POV to [2]. (11) may be the indirect evidence to prove the sum of number features can act individually.

***Conclusion***: ZPP's idea is intact in this system: usually, a POV corresponds to an Updater of To-do list in Kor. due to the obligatory S/JH-Agree in a Matrix JC. But the two can be different in a matrix Exh only if the Updater is a member of the POVs.

***Selected references***: Poletto, C. & R. Zanuttini. 2003. Making imperatives, The syntax of Italian dialects, OUP./ Portner, P. 2007. Imperatives and modals, NLLT./ Zanuttini, R, M. Pak & P. Portner. 2012. A syntactic analysis of interpretive restrictions on imperative, promissive and exhortative subject, NLLT.

**The Phonology of an Abstract Suffix for Eventual Evidentiality in Japanese**

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In this paper, a phenomenon called *I-Ochi* in Japanese is discussed in relation to its phonological characteristics. In particular, it will be pointed out that the construction's apparent peculiar characteristic, i.e., it basically selects an unaccented stem but requires deletion of an accent only to adjectives, is only apparent if we look carefully at further data. The construction does not require any sort of accent deletion *per se*, and the accentual phonology of the construction is only output-oriented.

*I-Ochi* (/i/-Drop), often analyzed from a syntactico-semantic point of view as a construction to express event evidentiality by Konno (2012), is most often described as the "drop" of /i/-ending in adjectives.

(1) akai "red" AkaQ! "(I recognize) It is this red!"

However, unlike what Konno (2012) claims, the construction exists with other parts of speech, namely those categories with nominal property.

(2) a. Noun
yamamori "heap" YamamoriQ! "(I recognize) It is a this much heap (of food)!"
b. Adjectival Noun
kodomo-na "childish" KodomoQ! "(I recognize) he/she/they is/are (behaving) this childish!"
c. Verbal Noun
kandoo-suru "be impressed" KandooQ! "(I recognize) I am this impressed!"

The examples above all share the semantic property of eye witnessing and reporting an instantaneous event.

As shown in (2), the construction basically is made by an addition of the -Q suffix to the stem.

(3) yamamori+Q → yamamoriQ

With adjectives, it appears that the present tense suffix *i* is deleted.

(4) aka-i + Q → akaQ

However, /i/ here is not a suffix and its dorsal feature realizes as /k/ in the past tense and other conjugational patterns. (Ito and Mester (1986))

(5) akai (present), akak-u (adverbial), akak-at-ta (past)

If we take the feature shared with all conjugational patterns, [dorsal], to be the lexical input of this stem, its realization as /k/ in adverbial and past forms requires no derivation of any kind. In the present tense form, because [dorsal] must be the nucleus of a mora, it will be realized as a vowel.

This paper discusses accentuation facts of the construction. First of all, the -Q suffix of the *I-Ochi* construction is accented.

(6) Taro-wa "Aka-Q!"-to it-ta.
Taro-TOP read-Q-that say-PAST

In (6), *-to* "that" is with a low pitch which the second /a/ of "akaQ" sounds high, which suggests that either /a/ or /Q/ is accented in a pitch accent language like Japanese. Although this does not prove that it is /Q/ that is accented, the existence of an unaccented adjectival stem, which *akai* is, suggests that it is due to /Q/ that the word *akaQ* is accented.

Whether it is /Q/ that bears an accent or /Q/ is "pre-accenting", the existence of a high lexical tone with the /Q/ suffix explains the fact that the construction cannot select an accented stem.

(7) a. mánia "mania" → *MániaQ! "(I recognize) he is such a maniac!"
b. himáwari "dandelion" → *HimáwariQ! "(I recognize) there are bunches of dandelions!"
cf. otaku "otaku, geek" → OtakuQ! "(I recognize) he is such a geek!"
sakura "cherry blossom" → SakuraQ! "(I recognize) there are so many blooms of cherry blossoms!"

The existence of a lexical high tone with /Q/ excludes selecting an accented stems that also have a high tone.

However, with adjectives, the accentedness of the stem does not matter in the *I-Ochi* construction. For example, *umai* "tasty", an accented adjective, does allow for the construction.

(8) umái "tasty" → UmaQ! "It is delicious!"

Here, we see apparently contradictory patterns, with adjectives, /Q/ appears to "delete" a lexical accent high tone, while with other types of stems, /Q/ simply does not select accented stems.

However, additional facts suggest that this is not contradictory by any means. First of all, the accent in Japanese adjectives is not fixed to a particular mora. The place of accent shifts according to the inflectional patterns.

(9) umái (present tense), úmak-at-ta (past tense)

It appears that the accent tone here is only decided on the surface output patterns. On the other hand, the lexical accents of (7ab) are fixed on a particular mora.

Second, even if accented, the FINAL accented stems co-occur with *I-Ochi* /Q/ suffix.

(10) a. yamá "mountain" → YamaQ! "(I recognize) I first saw this huge and long series of mountains!"
b. otokó "man" → OtokoQ! "(I recognize) the place here is filled with only men!"

Let us assume that the /Q/ suffix is "pre-accented", namely that it has a property that places an accent on the stem-final mora. Then, the new generalization is what follows:

(11) The *I-Ochi* /Q/ suffix selects stems that are not contradictory with stem-final accentuation.

With adjectives, as the accent is lexically floating, the lexical property of the stem does not contradict with (11). With other categories, the description is straightforward.

In sum, an apparent need for derivation with "deletion" of adjectival accents turns out to be explained just in terms of considerations of the surface output patterns. *I-Ochi* is triggered by a pre-accenting /Q/ suffix.

**References**

Ito, Junko and Ralf-Armin Mester (1986) “The Phonology of Voicing in Japanese: Theoretical Consequences for Morphological Accessibility.” *Linguistic Inquiry* 17.1, pp. 49-73.

Konno, Hiroyuki (2012)"The Japanese Adjectival Conjugational Ending Drop Construction: From a Syntax-Semantics Interface Perspective." *Gengo Kenkyu* 140 (The Linguistic Society of Japan): pp. 5-32.

Pierrehumbert, Janet B. and Mary Beckman (1988) *Japanese Tone Structure,* Cambridge, MA: MIT Press.

**Antisymmetry and Obligatory Contour Principle**

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Since Kayne (1994) was published twenty years ago, the antisymmetry theory has provoked interesting studies in syntax and related fields. However, the nature of its central claim Linear Correspondence Axiom (LCA) has not been much discussed. LCA states that linear order between syntactic objects must correspond to asymmetric c-command relations between them. However, the correlation between order and structure is not self-evident.

In this paper, I argue that the antisymmetry of phrase structure, which is claimed to be based on LCA, is derived from Obligatory Contour Principle (OCP) in phonology. I propose a constraint based on OCP, which is formalized as in (1).

(1) *OCP Stress*: sisters of a constituent must have different degrees of stress.

Since stress is the relative prominence relation between two adjacent objects (cf. metrical theory of stress), I assume a principle about stress placement stated in (2).

(2) *Set Stress*: a set is metrically stronger than a terminal.

Set Stress is cyclic in the spirit of Nuclear Stress Rule and Compound Stress Rule by Chomsky and Halle (1968). Both OCP Stress and Set Stress are satisfied in a constituent consisting of a head α and a branching complement βP in (3) (stressed objects underscored).

(3) $[_{\alpha P}\ \alpha\ [_{\beta P}\ ..\ \underline{X}\ ..]]$ (e.g. $[_{VP}$ love $[_{NP}$ white $\underline{\text{snow}}]]$

Here stress falls on one of the objects in the set βP (X) rather than a terminal α; sisters of αP, α and βP, have different degrees of stress.

OCP Stress rules out constituents consisting of two heads α and β shown in (4).

(4) * [α β]

Here Set Stress gives stress neither to α nor to β because α and β are terminals, not sets. OCP Stress also rules out (5), where each sister of the constituent is a set.

(5) * [αP βP]

Set Stress does not make difference between αP and βP. An interesting case is a constituent created by the first Merge. Assuming Kayne's (2008) idea of singleton set in the first Merge, OCP Stress and Set Stress are also satisfied in the case of the second Merge as shown in (6), where {β} is a singleton set created in the first Merge.

(6) $[_{\alpha P}\ \alpha\ \{\underline{\beta}\}]$

Thus, OCP Stress and Set Stress predict (im)possibility of phrase structures in (3) to (6).

A related idea to OCP Stress has been proposed by Chomsky (2013), who argues that constituents must have labels to be interpreted at LF. Label is an output condition on Conceptual-Intentional interface while our OCP Stress is an output condition on Articulatory-Perceptual interface. It seems to be the case that both LF and PF are responsible for ungrammaticality of symmetric structure.

This OCP-based analysis has a number of consequences. I briefly discuss three of them here. First, OCP Stress triggers Transfer (Spell-Out), which sends the complement of v and C (Chomsky 2008). Suppose that a branching subject is externally merged at the specifier position of v, the resulting vP violates OCP Stress, as shown in (7).

(7) $[_{vP}\ [_{DP}\ D\ NP]\ [_{v'}\ v\ VP]]$

Here, both DP and v' are a set; Set Stress cannot give difference of stress between DP and v'. An option to save the derivation is to Transfer VP to PF and make (8) in the working space.

(8) $[_{vP}\ [_{DP}\ D\ NP]\ v]$

In (8), DP is a set while v is a terminal; Set Stress assigns stress to DP to satisfy OCP Stress. This argument also holds in the case of CP phase. Suppose that DP containing an operator is internally merged at the specifier position of C, we have the structure in (9).

(9) $[_{CP}\ [_{DP}\ D\ NP]\ [_{C'}\ C\ TP]]$

Here, both DP and C' are a set, and Set Stress does not make difference between DP and C'; CP in (9) violates OCP Stress. Transfer of TP to PF saves this structure deriving (10), where Set Stress gives stress to DP and not to C.

(10) $[_{CP}\ [_{DP}\ D\ NP]\ C]]$

Thus, OCP Stress and Set Stress matches the standard claim that C and v are phase heads (discussion of T omitted here for space reason). This analysis predicts that v in intransitive and passive vPs does not trigger Transfer: these constructions do not have specifier of vP ($[_{vP}$ v VP]). This stress-based analysis is supported by the fact that stress is assigned to a branching subject or fronted wh-phrase as well as the last syntactic object, as shown in (11).

(11) a. Asian péople love gólf.
b. What spórt do you like bést?

Second, Set Stress has advantage over Cinque's (1993) null theory of stress assignment, which assigns the main stress to the most deeply embedded object in a structure. Cinque's theory relies on X-bar theoretic phrase structure with non-branching projections and bar levels (e.g. $X^{-1}$ or $X^{-2}$), which have been abandoned in the minimalist syntax with bare phrase structure. Moreover, multiple stress locations in (11) are not predicted by Cinque's theory.

Third, OCP Stress has advantage over LCA in the analysis of pronominal object. Chomsky (1995) argues that simple pronouns cliticize to the preceding verb to satisfy LCA. However, this local cliticization violates LCA if a pronoun adjoins the verb as in (12b).

(12) a. $[_{VP}$ V pron] b. $[_{VP}$ $[_{V}$ V pron] *pron*] (*pron*: original copy)

In (12b), pronoun asymmetrically c-commands V but follows V (cf. Kayne 1994). Our analysis explains cliticization by adjunction straightforwardly. In (12a), both V and Cl are a terminal, and Set Stress does not apply, giving OCP Stress violation. In (12b), Set Stress assigns stress to a set V-Cl and not to a terminal *pron*, and OCP Stress is satisfied.

One might argue that this Set Stress causes a problem of look-ahead. If OCP Stress applies at PF, Merge operation cannot decide whether it applies or not in the derivation. One way to solve this problem is to assume that Set Stress assigns stress feature to the set, which is interpreted at PF. It is not unnatural to assume that this stress assignment does not violate No Tampering Condition (Chomsky 2008) because phrasal and compound stress are not in the lexicon but are needed at PF connected to the articulatory-perceptual (AP) system.

In sum, this idea of OCP-based antisymmetry, which is a bare output condition on the PF interface, provides us a straightforward explaination of the syntactic antisymmetry that is derived from LCA.

**References**

Chomsky, N. 1995. *Minimalist Program.* MIT Press.

Chomsky, N. 2008. On phases. In R. Freidin, C. P. Otero, M. L. Zubizarreta, eds., *Foundational Issues in Linguistic Theory.* 291-321. MIT.

Chomsky, N. 2013. Problems of projection. *Lingua* 130, 33-49.

Chomsky, N. and M. Halle. 1968. *The sound pattern of English.* Harper & Row.

Cinque, G. 1993. A null theory of phrase and compound stress. *Linguistic Inquiry* 24, 239-297.

Kayne, R. 1994. *The antisymmetry of syntax*. MIT Press.

Kayne, R. 2008. Antisymmetry and the lexicon. *Linguistic Variation Yearbook* 8, 1–31.

**Quantifier Raising Targeting at the Articulated CP Domain**

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This research focuses on the nature of the Quantifier Raising (QR) in English and explores the possibility of landing on the fine-grained CP domain opposed to the analysis of adjunction to TP. As a great deal of related works such as May (1977), Hornstein (1995), Fox (1995, 2000) suggest, the application of QR should be limited in a clause boundary. This suggestion is based on the following examples in (1).

(1) a. A reviewer thinks every play will fail this season. a > every, *every > a
b. A reviewer attended every play this season. a > every, every > a
(Potsdam 2013: 674)

The conventional way of capturing the scope (un)ambiguity in (1) is drawing a distinction of whether the indefinite noun phrase *a reviewer* and the Universal Quantifier Phrase (UQP) *every play* are clause-mate or not. To go into more technical details, the relevant UQP can take a wide scope over the indefinite noun phrase by adjoining to TP in a root clause only if they are clause-mate. Each Logical Form (LF) representation of (1) where UQPs adjoin to TP brings about the Inverse Scope (IS) is shown in (2).

(2) a. *[$_{TP}$ every play$_i$ [$_{TP}$ a reviewer thinks [$_{CP}$ $t_i$ will fail this season ]]]
b. [$_{TP}$ every play$_i$ [$_{TP}$ a reviewer attended $t_i$ this season ]]
(Potsdam 2013: 674)

Fox (2000) attempts to give a principled account for why QR in (2a) is illicit but not in (2b), introducing two conditions associated with economic considerations.

(3) Scope Economy
QR must have a semantic effect. (Fox 2000: 23)
(4) Shortest Move
QR moves a QP to the closest position in which it is interpretable. (Fox 2000: 23)

Interestingly, these conditions predict that QR beyond a clause boundary may be possible if it satisfies (3) and (4) and the truth of this forecast is attested by the data in (5) where the UQP *every play* can take a wide scope over the indefinite noun phrase *a reviewer*.

(5) a. A reviewer knows when every play will fail. a > every, every > a
(Fox 2000: 64)

On the other hand, Schmerling (1998), Potsdam (1998, 2003), and Moon (1999) point out that Fox's regulations (3) and (4) may incorrectly cause overgeneration in which the wide scope reading of QPs with respect to CP-negation occurs if the QR fulfills (3) and (4). The related instance is presented in (6).

(6) a. Don't more than four people go on vacation!
b. It shouldn't be the case that more than four people go on vacation. NEG >MORE THAN 4
(i.e., Fewer than four people go on vacation!)
c. *There should be more than four people who don't go on vacation.*MORE THAN 4 > NEG
(i.e., *More than four people don't go on vacation!)

(Potsdam 2013: 679)

Based on plenty of data similar to (6), Potsdam (2013) asserts that the IS over CP-negation is always prohibited and rejects the way of obtaining the IS interpretation by applying the cross-clausal QR in (5). In short, Potsdam argues that the clause-boundedness of QR is in fact not overridden. However, there still remains a question how the contradicting data in (5) and (6) should be handled in an appropriate way.

In my cartographic approach, I can handle both cases. Given that a QP should land on the relevant specifier of the articulated CP structure (let's say, Spec-FocP) advocated by Rizzi (1997) to secure the IS interpretation and that a negative element is induced to move to the specifer of PolP to check a NEG feature and EPP (cf. Nishioka (2004)), which I assume that it projects above FocP, a negative element always take a wide scope over a QP and this analysis can elucidate the related examples such as (6).

(7) $[_{ForceP}$ Force $[_{PolP}$ NEG Pol $[_{FocP}$ QP Foc $[_{FinP}$ Fin $[_{TP}$ T …]]]]]
(cf. Rizzi 1997)

The analyses that a variety of QPs are displaced for their feature checking are presented by Szabolcsi (1997) and Brody and Szabolcsi (2003). According to their statements, they classify different QPs and assume that there are various functional projections to host them. It seems safe to summarize that QPs undergo overt (or covert) displacement and they are placed on the discourse related functional projections; for instance, FocP in Rizzi's sense of the articulated CP domain because their motivation to devise such functional projections is based on the idea that QR should occur to interpret QPs as focus elements. As for the case such as (5) where the QR beyond a clause boundary seems to occur, I made an assumption that there would be a lack of FocP or that FocP would not be available for QPs to land on in an embedded clause. For this reason, the relevant QPs can be candidates to move up to the CP domain in a root clause. This assumption is not unnatural since it is widely known that focalization in an embedded clause is infelicitous (see Culicover (1991a) and Haegeman (2012) among others). To sum up, my approach can be supported not only by the empirical, but also by the theoretical perspective.

**Selected References**


Brody, Michael and Anna Szabolcsi (2003) "Overt Scope in Hungarian," *Syntax* 6-1, 19-51.

Culicover, Peter (1991a) "Polarity, Inversion, and Focus in English," *Proceedings of the Eighth Eastern States Conference on Linguistics*, 46-68.

Fox, Danny (2000) *Economy and Semantic Interpretation*, MIT Press, Cambridge.

Haegeman, Liliane (2012) *Adverbial Clauses, Main Clause Phenomena, and Composition of the Left Periphery: The Cartography of Syntactic Structures,* Vol. 8, Oxford University Press, Oxford.

Nishioka, Nobuaki (2004) "Quantifiers and Negation: A Minimalist Approach to Partial Negation," *English Linguistics* 21, 323-347.

Potsdam, Eric (2013) "CP-negation and the Domain of Quantifier Raising," *Linguistic Inquiry* Vol. 44, 674-684.

Rizzi, Luigi (1997) “The Fine Structure of the Left Periphery,” *Elements of Grammar: Handbook of Generative Syntax,* ed. by Liliane Haegeman, 281-338, Kluwer, Dordrecht.
Szabolcsi, Anna (1997) “Strategies for Scope Taking,” *Ways of Scope Taking,* ed. by Anna Szabolcsi, 109–155, Kluwer, Dordrecht.

**Deriving the Illocutionary Force**

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**The issue:** *Wh*-expressions can typically denote something more than interrogativity: the indefinite *wh* being one case (1)a; the rhetorical *wh* being another (1)b. A third case comes from a very interesting "speaker-oriented" *wh* (henceforth, SOW) existing and prominent in Mandarin Chinese. Such an expression yields a strong atypical illocutionary force which heavily involves speaker's volition as in persuading (2)a, prohibiting (2)b, denying (2)c, refuting (2)d, etc., and has lost its original interrogativity (see, for example, Shao 1996, Cheung 2009, Tsai 2011).

(1) a. Wo bu xiang chi shenme.
I not want eat what
'I don't want to eat anything.'
b. Bijing, women hai neng zuo shenme?
after.all we still can do what
'After all, what else can we do?'

(2) a. Ni dan shenme xin?! (Persuading)
you worry what mind
'Don't worry!"
b. Ni ku/pao shenme?! (Prohibiting)
you cry/run what
'Don't cry/run!'
c. Wo shenme/nali pianxin?! (Denying)
I what/where biased
'I am not biased!'
d. Shenme/Nali ta hui lai?! (Refuting)
what/where he will come
'It is not the case that he will come!'

Although the SOW bears a resemblance to the rhetorical *wh* because they both have to do with negation, that's where the similarity ends. A distinctive property of the former is that it syntactically functions as an adjunct even if it bears the same morphological makeup as a *wh*-argument (e.g., *shenme* 'what'). Therefore, whereas the rhetorical *wh* in (1)b serves as an argument to the predicate and yields the negative assertion when uttered with a sarcastic tone, its apparent minimal pair in (2)b can only be interpreted as the illocutionary SOW denoting a strong force of prohibition. Specifically, the SOW *shenme* 'what' of the (2)b type serves as an adjunct since its predicate *ku/pao* 'cry/run' is of the unergative type that lacks an internal argument. Further test from verb-copying helps teasing apart the SOW from the rhetorical *wh* in that the former can allow a "verb-copy" attached to the end (3)a whereas the former cannot (3)b.

(3) a. Ni ku/pao shenme ku/pao?!
you cry/run what cry/run
'Don't cry/run!'

b.*Bijing, women hai neng zuo shenme zuo?
after.all we still can do what do
'After all, what can we do?'

**The claim:** In this study, I show that the illocutionary force of SOW in Chinese is derived from the left peripheries of a sentence, thanks to the rich inventory in the CP domain in Chinese, which on the one hand explains the full range of syntactic effects yielded by the SOW while on the other hand it testifies the validity of the Split-CP hypothesis as claimed in Rizzi (1997, 2002).

**The process:** I start from presenting an array of SOW of various syntactic heights (i.e., somewhere within DP (2)a, VP (2)b, above VP (2)c, and above IP (2)d, showing that even so they consistently exhibit root/main clause phenomena (Emonds 1970, 1976, Hooper & Thompson 1973), take the undominated scope, and type sentences into exclamative ones. Next, with evidence from (weak) island and intervention effects it is suggested that the scope-taking strategy of the SOW is by way of covert movement. Then, via the interaction with high elements such as epistemic modals, quantifier topics, focus phrases, and high adverbs, the target of movement is pinned down to the CP periphery. One piece of evidence comes from the distinction between the canonical interrogative *wh* and the SOW with respect to their interaction with a high quantifier phrase in (4)-(5). Crucially, the canonical interrogative *wh* in (4) takes the sentential scope, lower than the quantifier phrase. Yet, the SOW should take scope somewhere even higher since the quantifier phrase above it blocks its covert movement, very much reminiscent of intervention effect. (Note that (5)a may denote a purpose reading 'Everyday, for what purpose would you cry/run?' which can be derived independently.)

(4) a. Meitian, ni dou hui chi shenme?
everyday you DOU will eat what
'Everyday, what would you eat?'

b. Mei-ben-shu, weishenme ni dou du guo?
every book why you DOU read Exp.
Lit: 'Every book, why have you read?'

(5) a.*Meitian, ni dou ku/pao sheneme?!
everyday you DOU cry/run what
'Everyday, don't run!'

b.??Mei-ben-shu, shenme/nali ta dou du guo?!
every-book what/where he DOU read Exp.
'Every book, it is not the case that he has read!

Such observation leads to the speculation that the designated target of covert movement of the SOW should be the topmost position of a sentence, specifically, ForceP of the matrix CP, in order to derive the speaker-oriented force, and hence the syntactic effects above.

**Concluding remark:** All in all, this study shows that the SOW in Chinese is syntactically distinct from the canonical interrogative *wh* in that the former undergoes covert movement driven by the topmost Force head whereas the latter either does not move (the *wh*-nominals)

or moves covertly to the Int(errogative)P (the *wh*-adverbs) lower than ForceP. This is a desirable result since it successfully predicts why the SOW behaves differently from the high *wh*-adverbs (e.g., 'why') in the higher CP domain whereas they pattern together below CP.

**References:**


Cheung, Lawrence Y.-L. 2009. Dislocation focus construction in Chinese, *Journal of East Asian Linguistics,* 18.3: 197-232.

Emonds, Joseph. 1970. Root and structure-preserving transformations. Ph.D. diss: MIT.

Emonds, Joseph. 1976. *A transformational approach to English syntax.* New York: Academic Press.

Rizzi, Luigi. 1997. The fine structure of the left periphery. In Liliane Haegeman (ed.) *Elements of grammar*, p. 281-337. Dordrecht: Kluwer Acad. Publishers.

Rizzi, Luigi. 2002. Locality and left periphery, in Belletti, A., (Ed)., *Structures and Beyond. The Cartography of Syntactic Structures*, vol. 3. Oxford University Press.

Shao, Jingmin. 1996. *Xiandai Hanyu Yiwenju Yanjiu* [Studies on Chinese Interrogative Constructions], Shanghai: Huadong Normal University Publisher.

Tsai, Wei-tien Dylan. 2011. Cong 'zhe hua cong he shuo qi' shuo qi [Speaking from 'where should I begin?'], *Yuyanxue Luncong* [Essays on Linguistics] 43: 194-208.

**Investigating Superlatives in the Littlest Linguists**

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**SUMMARY:** This paper presents novel experimental evidence for a restriction on the interpretation of superlative expressions such as (1) in English; while the absolute reading (ABS) is available (2), the relative reading with NP-internal focus (RIN) is not (3). Recent accounts derive this interpretive restriction from a setting of the NP/DP parameter. Our experiments show that 4-year-olds have difficulty with the comprehension of such structures, suggesting that knowledge beyond the setting of the NP/DP parameter is required.

**BACKGROUND:** While the reading in (2) is universally available, (3) has been observed to be available only in languages without articles (i.e. NP languages) such as Polish (Pancheva & Tomaszewicz 2012, hereafter PT).

(1) Sally bought the biggest painting by Monkey.
(2) Of the paintings produced by Monkey, Sally bought the biggest one. (ABS)
(3) Of the paintings purchased by Sally, the biggest one was produced by Monkey (and not by some other painter). (RIN)

According to PT, the RIN requires movement of the focus element PP as well as the degree phrase DegP out of the NP, as in (4). Assuming this, Shen (to appear) derives the unavailability of the RIN as follows. The focused PP by Monkey is an adjunct to NP (cf. one-substitution test, (5)). In English, such adjuncts cannot move out of DP (6). Such extraction is ruled out by the Phase Impenetrability Condition (PIC) (Chomsky 2000) and Anti-locality (Abels 2003) (cf. Boškovic 2005, a.o.): for the PP to move out of DP, it must move through its phase edge; but any movement must cross at least one full phrase. Movement of PP to Spec,DP is thus ruled out as too short (7); since the LF in (4) cannot be generated, the RIN is unavailable in DP languages. In NP languages however, extraction of PP does not violate locality constraints: NP is a phase, and the adjunct PP is base-generated at the edge; movement of PP and DegP can both occur, and the RIN is available (8).

(4) $[[_{PP_F}$ By Monkey] $[[_{DegP}$ EST-C] [~S [Sally bought the $[_{NP}$ $[_{AP}$ $t_{DegP}$ big] $[_{NP}$ $[_{NP}$ painting] $t_{PP}]]]]]]$
(5) Sally bought a painting by Monkey, and Ellie bought one by Bunny. (one-substitution test)
(6) a. *It was by Monkey that Sally bought a painting.
b. *By whom did Sally buy a painting?
c. *A girl has a painting by every monkey. (*every monkey > a girl)
(7) $[_{DP=PHASE}$ the $[_{NP}[_{NP}$ $[_{AP}$ $[_{DegP}$ EST-C] big] $[_{NP}$ painting]]$[_{PP}$ by Monkey]]]
(8) $[_{NP=PHASE}[_{NP}$ $[_{AP}$ $[_{DegP}$ EST-C] big] $[_{NP}$ painting]]$[_{PP}$ by Monkey]]

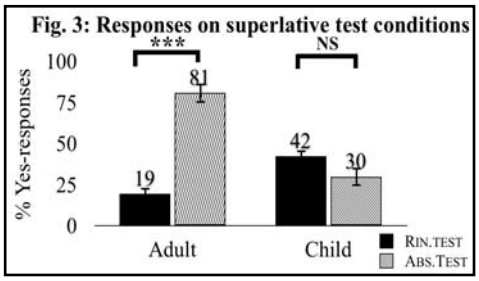
According to the current theory, in order to derive the RIN as in (4), children must have knowledge of covert movement (of PP and DegP). In order to correctly disallow the RIN, English-acquiring children must also have knowledge of: (i) the PIC and anti-locality conditions; (ii) the distinction between adjuncts and arguments; and (iii) the setting of the NP/DP parameter. We take it for granted that 4-year-olds have knowledge of universal conditions such as (i); additionally we assume that children have knowledge of the argument/adjunct distinction (cf. deVilliers 1990/2008), and moreover have set the NP/DP

**Fig. 1. RIN condition: "Sally bought the biggest painting by Monkey"**
(i) RIN target: YES (The biggest painting that Sally bought is by Monkey)
(ii) ABS target: NO (Sally didn't buy Monkey's biggest painting)

**Fig. 2. ABS condition: "Sally bought the longest necklace by Monkey"**
(i) RIN target: NO (The longest necklace that Sally bought is by Bunny)
(ii) ABS target: YES (Sally bought Monkey's longest necklace)

parameter well before the age of 4 years (cf. Koulidobrova 2012). With these assumptions in mind, we set out to test for children's ability to access/disallow the RIN reading.

**EXPERIMENT:** We used a Truth Value Judgment Task to assess participants' ability to access the RIN/ABS readings. Participants watched a series of short stories on a laptop computer. Each test story involved a character, Sally, buying a set of objects made by Monkey or Bunny, which differed along some dimension (e.g., length/size, cf. Fig. 1-2). At the end of each story, a puppet was asked a question, and the participant's task was to decide whether the puppet's answer was right or wrong. Participants were expected to provide no-responses on the RIN condition and yes-responses on the ABS condition. If a participant allowed the RIN however, they were expected to accept the RIN items, assuming they were charitable. We used a 2x2 design with group (adult vs. child) and reading type (RIN vs. ABS, within-subject) as factors. Each participant received 2 training items, followed by 8 test and 4 control items, which were pseudo-randomized and counterbalanced. Test trials included four RIN test items, which were true on the RIN reading and false on the ABS reading, and four ABS test items, which were false on the RIN reading and true on the ABS reading. Control trials included two by-phrase controls (Sally bought a bowl by Monkey) and two superlative controls (Sally bought the tallest plant). In all, 16 English-speaking children (3;11-5;03, M=4;07) and 22 English-speaking adults participated.




**RESULTS:** [Fig. 3] A 2x2 ANOVA revealed a significant main effect of reading type ($F(1,72)=13.22$, $p<.001$), no effect of group, and a significant interaction ($F(1,72)=19.20$, $p<.001$). Adults were significantly more accepting on the ABS than the RIN trials (Tukey HSD, $p<.001$), while children did not differ significantly on the two conditions.

**Target pattern:** 19/22 adults were target-like, providing experimental support for the unavailability of the RIN reading. By contrast, only 3/16 children were target-like, suggesting that even by 4, many children have not arrived at the target interpretive restrictions on superlatives.

**Reverse pattern:** 3/22 adults and 5/16 children displayed a reverse pattern, accepting the RIN and rejecting the ABS items. We propose that these participants reanalyzed the by-phrase as an adjunct to VP (9). Since VP adjuncts can move in English, it is possible to generate an LF compatible with the RIN condition.

(9) Sally bought the $[_{DP}\,[_{DP}$ biggest painting$]\,[_{PP}$ by Monkey$]]$
⇒ Sally $[_{VP}\,[_{VP}$ bought $[_{DP}$ the biggest painting$]]\,[_{PP}$ from Monkey$]]$

These same participants would be expected to reject the ABS items: in this case, both the PP (VP adjunct) and DegP are interpreted in situ and the comparison class is the set of all six paintings, yielding an interpretation akin to: Sally bought the biggest painting in the context, and she bought it from Monkey, false in the given scenario. **Reject-all pattern:** 5/16 children rejected all critical test trials (but were target-like on controls); we hypothesize that these

children consistently interpreted the by-phrase as an adjunct to VP, and interpreted the PP and DegP in situ; this would yield the interpretation that Sally bought the biggest/longest, etc. from the comparison set of all six objects - false in every test story. In a follow-up experiment conducted with 17 adults, we changed the verb from *buy* to *paint*, which is incompatible with the VP-adjunct reading; this manipulation reduced the rate of non-target RIN responses to 4%, confirming the above explanation for the reverse pattern. **CONCLUSION:** The findings of this study provide novel experimental evidence that English-speaking adults disallow the RIN reading. They moreover suggest that although children may have knowledge of the PIC/Anti-locality, the argument/adjunct distinction, and the NP/DP parameter well before the age of 4 years, these are insufficient to derive the interpretive restrictions on superlative expressions.

**REFERENCES:** **Abels, K. 2003.** *Successive cyclicity, anti-locality, and adposition stranding*. UConn dissertation. **Bošković, Ž. 2005.** On the locality of left branch extraction and the structure of NP. Studia Linguistica. **Chomsky, N. 2000.** Minimalist inquiries: the framework. *Step by Step*. **de Villiers, J., T. Roeper, & A. Vainikka. 1990.** The acquisition of long-distance rules. *Language Processing and Language Acquisition*. **de Villiers, J., T. Roeper, L. Bland-Stewart, & B. Pearson. 2008.** Answering hard questions: wh-movement across dialects and disorder. *Applied Psycholinguistics* 29. **Koulidobrova, H. 2012.** *When the quiet surfaces: 'Transfer' of argument omission in the English of ASL-English bilinguals*. UConn dissertation. **Pancheva, R. & B. Tomaszewicz. 2012.** Cross-linguistic differences in superlative movement out of nominal phrases. WCCFL30. **Shen, Z. To appear.** On the relative reading with NP internal focus in superlatives. WCCFL 31.

**Deriving Structural Deficiency**

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It is well known that certain left peripheral phenomena are restricted to root or root-like clauses (Emonds 1970, Hooper and Thompson 1973). This has perhaps been documented most extensively for English where, for instance, argument fronting in adverbial clauses, whether it be as topicalization of as focalization, is unacceptable for the majority of speakers. Attempts have been made to relate the absence of argument fronting (and similar root phenomena) to the idea that the certain clauses are more 'compact', function as one unit of information and lack an articulated internal information structure (IS) (Hooper and Thompson 2013, van der Wal 2013, Guldemann 1996).

However, it is not the case that the relevant clause types cannot encode IS: for instance, English adverbial clauses are compatible with clefting and with *in situ* focusing, two devices that encode IS. In addition, languages that encode topicalization through clitic left dislocation (CLLD), such as French and Italian, allow this pattern also in adverbial clauses. Such languages thus seem to be more liberal in allowing CLLD in the domains that block argument fronting in English.

It has been proposed that in English clause types with restrictions on argument fronting, such as adverbial clauses, are somehow structurally defective in that the relevant layers of the left periphery that would host fronted arguments are truncated (Kuroda 1992, Haegeman 2006). To capture the more liberal distribution of CLLD, it could then be argued that in languages with CLLD the relevant clauses have a 'larger' left periphery, thus allowing for the pattern, or alternatively, that the relevant clauses are also truncated, like their English counterparts, but that CLLD differs structurally from argument fronting in English in targeting a lower layer of the left periphery which survives even in cases of truncation (Haegeman 2006). With its articulated left peripheral structure, a cartographic approach (Rizzi 1997, Cinque and 2010) lends itself fairly easily to the implementation of structural truncation. The absence of specific left peripheral projections can then be related to a reduced potential for encoding IS and for the absence of assertion (cf. Hooper and Thompson 1973, Haegeman 2006).

In the presentation, I will show that the 'truncation' of clauses incompatible root phenomena need not be 'stated' as such, and that the restricted availability of the left periphery in certain clause types is a by- product of their derivation, more in particular such clause types are argued to be derived by movement of a TP-internal operator to the left periphery. Only left peripheral material that is independently known not to block operator movement will survive in such environments, CLLD being a prime example.

It will also be shown that, the movement account can also capture the restricted distribution of certain types of adverbial modifiers, in particular (i) one implementation of the movement account of conditional clauses will account for the unavailability of high modals in such clauses and (ii) a specific implementation of the movement account of finite temporal clauses captures the non-availability of adjuncts modifying the reference time (see Demirdache and Uribe-Etxebarria 2012).

In the final part of the presentation it will be shown that while CLLD does not block operator movement and thus remains available in adverbial clauses, other types of left peripheral fronting in languages displaying CLLD are also subject to the restrictions found for

English argument fronting. Illustrations will be provided from Italian Focus fronting (Bocci 2009) and Resumptive preposing (Cardinaletti 2010) and from French PP preposing (Authier and Haegeman to appear) and VP preposing (Authier 2011).

**Decomposition, Cartography, and Antisymmetry: Scattering Objects**

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The points of departure for my talk are Greenberg's (1963) Universal 20 and its syntactic modeling (Cinque, 2005), Antisymmetry and Japanese (in Kayne's 2005), and various works on the distribution of objects. In the languages of the world, an invariant hierarchical order of Merge (Dem(Num(A))) surfaces prenominally (Greenberg 1963), but postnominally, a much greater variety of orders is attested, but certain patterns are systematically unattested (Cinque 2005). Cinque (2005) proposes that all orders are derived from a uniform syntactic hierarchy by leftwards movement of a constituent containing the nominal head, with various pied-piping options responsible for the greater opacity and variability of postnominal orders. Unattested orders are those that cannot be derived by the rules and principles of UG. Similar patterns have since become apparent in a great variety of other domains.

From these studies, we can draw the following lesson: the linear order before some "lexical" head is likely to reveal part of the syntactic hierarchy (the order of Merge, both internal and external)), but post head order may show considerable opacity, and therefore should be analyzed with utmost care (contrary to current practice). All orders can be taken to derive from a unique hierarchy of Merge, under antisymmetry, with leftward movement and pied-piping.

I will apply this lesson to the clausal domain, focusing in particular on the distribution of objects and the different hierarchical positions they occupy, In many languages, objects show different syntactic distributions or formal encodings, depending on whether they are (weak pronouns), definite DPs, (focused DPs, quantifed DPs, specifc indefinites, indefinites. (cf. Bossong 1985, Aissen 2003, Diesing 1977), which can be represented as a structural hierarchy.

This presentation explores the question whether this hierarchy can in fact be taken to hold for all human languages, with UG leaving languages no choice in the matter Kayne, 1998. This "cartography" of objects is expected to show up invariably pre verbally (O Aux V/VAux), regardless of whether objects are preverbal or postverbal AUX V O, with postverbal objects derived by movement of V/VP constituents past the objects, and v/VP remaining stuck at various different heights. In my talk, I will discuss languages from different language families that support the theory, languages that seem to pose apparent problems, and the general type of languages that are predicted to be unattested, given the theory under discussion.

<u>Selected References</u>

Aissen, J., 2003, Differential object marking: Iconicity vs. economy, Natural Language & Linguistic Theory, 21, 3, 435-483.

Bossong, G. 1985, Empirische Universalienforschung: diferentielle Objekt-markierung in den neuiranischen Sprachen, Narr.

Cinque, G. 2005. Deriving Greenberg's universal 20 and its exceptions, Linguistic inquiry, 36. 3. 315-332.

Greenberg, Joseph. 1963. Some universals of grammar with particular reference to the order of meaningful elements. In Universals of language, ed. by Joseph Greenberg, 73113. Cambridge, Mass.: MIT Press.

Diesing, Molly 1997. Yiddish VP order, and the Typology of Object movement in Germanic,

NLLT 15: 369427, 1997.
Haider, H 2012 Type III - theoretical and typological modelling - an invitation to empirical assessment
Kayne, Richard S. 1994. The Antisymmetry of Syntax. Cambridge, MA: MIT Press. Kayne, Richard S. 2005. Antisymmetry and Japanese. In R. S. Kayne Movement and Silence. 215-240. New York: Oxford University Press.
Kayne, R.S.1988. Overt vs. covert movements, Syntax, 1, 2, 128-191, Wiley Online Library.
Koopman, H On the absence of case chains in Bambara, NLLT.
Koopman, H. 2012, Samoan Ergativity as Double Passivization, Functional Heads: The Cartography of Syntactic Structures, Oxford University Press.
Koopman, H. 2012. On Dutch allemaal and West Ulster English all.
Svenonius, Peter 2000 (ed) On OV and VO. Benjamins. Szabolcsi, 1997. Ways of Scope Taking.

**The Emergence of Default Accent in Kyungsang Korean**

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Kenstowicz & Sohn (2001) document the assignment of a trochaic-foot-like accent at the right edge of the word in the adaptation of English loanwords into North-Kyungsang Korean, which often overrides the accent of the English word: ˈlemon > remón, ˈdomino > tomíno. This accent pattern was subsequently demonstrated to also hold for loanwords in the South Kyungsang dialect by Jun (2006) and independently by Lee (2006, 2009). Since Kyungsang Korean has a contrastive lexical accent system comparable to Japanese (cf. káci 'kind' vs. kací 'eggplant'), there is a puzzle as to why the English accentual locus is not preserved. Even more mysterious is from where the default trochaic accent originates. Kenstowicz and Sohn (2001) hypothesized that it reflects a UG default and thus fell under the rubric of Emergence of the Unmarked (McCarthy & Prince 1994). Subsequent research by Kim (2013) for North Kyungsang has argued that the default accent reflects statistical biases in the distribution of the contrastive accent in the NK lexicon. Kubozono (2006) presents a parallel argument for the emergence of the default Latin stress rule operating in Western loanwords into Japanese (Kubozono 2006). In this presentation (based on joint research with Young Ah Do and Chiyuki Ito), we describe several novel-word experiments that attempt to address the question from where the default accent emerges: statistics of the native lexicon, UG default, and/or English source language.

**References**

Jun, Ho Kyung. 2006. Factors affecting accentual patterns of loanwords in Pusan Korean. *Harvard Studies in Korean Linguistics* 11, 158-170.

Kenstowicz, Michael and Hyangsook Sohn. 2001. Accentual adaptation in North Kyungsang Korean. In Michael Kenstowicz (ed.), *Ken Hale: A Life in Language*, 239-70. Cambridge: MIT Press.

Kim, Hyun-ju. 2012. Syllable structure, frequency, analogy, and phonetics: factors in North Kyengsang Korean accentuation of novel words. Ph.D. dissertation, Stony Brook University.

Kubozono, Haruo. 2006. Where does loanword prosody come from? A case study of Japanese laonword accent. *Lingua* 116, 1140-70.

Lee, Dongmyung. 2006. Weight-sensitive tone patterns in loanwords of South Kyungsang Korean. *Harvard Studies in Korean Linguistics* 11, 197-210.

Lee, Dongmyung. 2009. The loanword tonology of South Kyungsang Korean. Ph.D. dissertation, Indiana University.

# Conditional Inversion and Types of Parametric Change

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Earlier work (Biberauer & Roberts 2012) has developed the theory of parameters, leading to a four-way distinction among kinds of parameters, as in (1):

(1) For a given value $v_i$ of a parametrically variant feature F:
   a. **Macroparameters**: all functional heads of the relevant type share $v_i$;
   b. **Mesoparameters**: all functional heads of a given naturally definable class, e.g. [+V], share $v_i$;
   c. **Microparameters**: a small sub-class of functional heads (e.g. modal auxiliaries, pronouns) shows $v_i$;
   d. **Nanoparameters**: one or more individual lexical items is/are specified for $v_i$

This taxonomy is not seen as UG-given, but is set against the general background of an emergentist view of parameters and parameter-setting which we will not elaborate on here (see Biberauer 2011, 2013, 2014a,b). Following the general view of parametric change as involving reanalysis of PLD through language acquisition, macroparameters must be "easily" set; hence they resist reanalysis and are strongly conserved, while meso- and microparameters are correspondingly less salient in the PLD and hence less resistant to reanalysis and less strongly conserved. Nanoparameters are in principle still less resistant to reanalysis and therefore more prone to change; however, frequency effects may be relevant here, with high-frequency lexical items likely to retain what become, over time, irregularities. This kind of nanoparametric setting is similar to English irregular verbs in being an item-specific specification which overrides the synchronic default (presumably by disjunctive ordering of the standard kind), where the synchronic irregularity may reflect an earlier regularity (e.g. the ablaut relics in Modern English irregular verbs).

The synchronic corollary of these different kinds of parametric change is that macroparameters are frequently observed to hold across large language families in a fairly uniform way (e.g. rigid head-final order across categories in (almost) all attested Dravidian languages). Mesoparameters are characteristic of language families at the level of the main sub-groupings of Indo-European, e.g. Germanic. Microparameters characterise variation among more closely related systems, such as the individual Romance languages and dialects. Finally, nanoparameters are idiosyncratic properties of sub-systems of individual languages and dialects.

In this paper, we will document a case of change from a mesoparameter to a microparameter to a nanoparameter involving inversion in conditionals in the history of English, henceforth Conditional Inversion (CI). The central aspect of this kind of inversion has not changed since Old English, in that it involves movement of T to C where C has a feature marking the clause as Irr(ealis) (e.g. *swelte ic, libbe ic* "die I, live I"—"if I live or die"). We take Irr to be one possible clause-type feature associated with C, along with Inter(rogative), Opt(ative) and others. In Old English (OE), CI was part of a general set of operations raising inflected verbs into the C-system, the verb-second (V2) system. We take V2 to involve two features of C, one triggering V/T-to-C movement and an EPP-type feature triggering XP-movement to SpecCP. CI was a V1 structure, involving only the first of these features. This feature is general to all root and some embedded Cs and holds across Germanic. As such, it is a good candidate for a mesoparameter.

What has changed since Old English is the range of elements affected by this operation, and how it relates to other forms of inversion. The loss of V2 is usually dated to the 15th

century (Fischer et al. 2000), but various forms of "residual V2" in marked clause types survived, e.g. Interrogative Inversion (II). CI clearly also survived the loss of general V2:

(2) *Wist I that it were trewe .. I woulde well thynke, that .. he hanged himself* (More)

The shift from full to residual V2 is a shift from a meso- to a microparameter, in that the class of Cs attracting T was restricted. (2) features a lexical verb in C. In the Early Modern (ENE) period movement of lexical Verbs to T was lost. From this period on only auxiliaries undergo CI, again in line with interrogative and other kinds of inversion. The shift from residual V2 to subject-aux inversion further restricts the items undergoing inversion, although the trigger for T-to-C is unchanged. What changed here is a feature of T, moving from a meso – all verbs – to a micro – just auxiliaries – value, which we will formalise. The most interesting change to affect CI has taken place quite recently, though. From the 17th to the 19th century, CI was no different from other inversions in that all auxiliaries could undergo it, including "dummy" *do*:

(3) *… for did I not consider you as my Patron …* (1664 Dryden)

Denison (1998) notes that CI applied to all auxiliaries until the mid-19th century. In contemporary English, by contrast, CI is restricted to *had*, *should* and, more marginally, *were*:

(4) a. *Had I been rich, everything would have been ok.*
b. *Should he do that, everything will be ok.*
c. *?Were I/he to do that, ...*
d. **Did I do that, everything would be ok.*

This situation looks like a nanoparameter, as it affects one modal (*should*), and specific forms of *have* and *be* (the latter in certain contexts only, in that predicative *be* is worse than (4d)). Meanwhile, II has remained productive for all auxiliaries. Optative inversion, however, was first limited to *may* and has now become formulaic (*May you rot!* but **May you eat!*).

We analyse these developments as schematised in (5):

(5)

| | |
|---|---|
| OE/ME to ca.1450: | C [±Verid] attracts v/V; |
| | C [+Verid] is [+EPP], C [-Verid] is [-EPP]. |
| ME from 1450; conservative ENE: | C [-Verid] attracts T; T attracts v/V |
| Innovative ENE, NE to ca.1850: | C [-Verid] attracts T; T no longer attracts V |
| 1850-present: | C [Irr, Past] attracts T (CI) |
| | C [Interr] attracts T (II) |
| | (C [Optative] attracts T; T has [Opt]) (OI) |

Here [±Verid] is a formal feature encoding veridicality, defined as in (6) (Giannakidou 1998):

(6) A propositional operator *F* is veridical iff *Fp* entails *p*: *Fp* → *p*; otherwise *F* is nonveridical.

The [Verid] feature has sub-features [Irr, Inter, Opt]. These features differentially attract T in contemporary English. Moreover, in contemporary English T productively bears [Irr] and [Interr] (or [Pol(arity)]; cf. Duffield 2013) and so can be attracted by C bearing either of these features: [Inter] C can attract any auxiliary; but only *had, should* and (one kind of) *were* are [Irr, Past] and so able to be attracted by C[Irr]. Hence we see the change to a nanoparametric

property, and more generally, the break-up of the formerly productive residual V2 into three sub-operations involving more specific features.

The change from full to residual V2 has taken place in a number of Romance varieties (French, various Northern Italian dialects). In some Northern Italian varieties, mostly in the North West, II and CI have also been lost altogether, as in advanced varieties of English. What seems to be unique to English is the loss of V/v-to-T movement and the concomitant restriction of all forms of inversion to auxiliaries, as well as the more recent restriction of CI to a small subset of auxiliaries. The inversion operation itself, though, has not changed at all; what has changed are the classes of features which trigger T-to-C movement and the classes able to be triggered in a given clause type.

We conclude by considering in more detail how an emergentist (1)-style parametric taxonomy allows us to understand how systems may become gradually more marked, in the sense of requiring more specific triggers for operations, until a feature (class) ceases to act as a trigger, and the system radically simplifies. Unlike many minimalist approaches to diachronic change, then, ours does not predict that change will always lead to simplification or that change will be uniformly simplifying or complexifying.

**On the "Clausal-Connective" and "Nominal-Connective" *ka* 'or' in Japanese**

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**[Introduction]** In Japanese, Alternative Questions (AltQs) and the counterpart of English *either…or…*construction have the forms in (1) and (2) which seem to connect two clauses.

(1) Taro-wa koohii-o nonda ka (soretomo) otya-o nonda ka?
T-Top coffee-Acc drank or or tea-Acc drank or
'Did Taro drink coffee or did Taro drink tea?' (Uegaki (2013: 2))

(2) [John-ga hasitta ka] [Mary-ga koronda ka] da.
J-Nom ran or M-Nom fell.down or Copula
'Either John ran or Mary fell down.' (Kishimoto (2013: 16))

In addition to (3) and (4), the constructions also have forms which seem to connect two nominals:

(3) Taro-wa [koohii ka otya (ka)]-no dotti-o nonda no?
T-Top coffee or tea or-Gen which-Acc drank Q
'Did Taro drink coffee or tea?'

(4) Taro-wa [jyotyuu ka ryoorinin (ka)](-no dotti-ka)-o sagasite iru.
T-Top maid or cook or-Gen which-KA-Acc look.for is
'Taro is looking for either a maid or a cook.'

The question is, are "clausal disjunction" (1), (2) and "nominal disjunction" (3), (4) from the same source (i.e., the latter is derived from the former as Han & Romero (2004) claim for English (5), or are they derived independently of each other?

(5) a. Did John drink coffee or tea?
b. $Q_i$ Did $t_i$ [John drink coffee or ~~John drink~~ tea]?

I pursue the latter line of argument and propose that although the semantic role of the two *ka*'s is the same, they differ in the morphosyntactic properties. Ellipsis can occur inside the connected clauses in "clausal disjunction" ((7a) below,) but it has no effect on the morphosyntactic properties of the two *ka*'s.

**[Core Data]** First of all, let us see that the *ka*'s in the "clausal disjunction" AltQs in (1) are really disjunction particles, although Uegaki (2013) claims that (1) involves disjunction of two Yes/No Qs and the *ka*'s are Q particles. Uegaki (2013) shows that the *ka*'s can be replaced by the Q particle *no*:

(6) Taro-wa koohii-o nonda **no** Taro-wa otya-o nonda **no**? (cf. (1))
(Uegaki (2013: 5))

However, while (6) has a rising intonation in both clauses, the intonation in (1) is rising in the first clause and falling in the second. This is odd if both (1) and (6) involve two Yes/No Qs. I thus claim that (6) is a juxtaposition of Yes/No Qs while (1) involves two clauses connected by disjunction particles.

Below I give three points in which "clausal disjunction" and "nominal disjunction" differ. First, see the (un)availability of *soretomo* 'or' in "clausal disjunction" (7a) and "nominal disjunction" (7b).

(7) a. Taro-wa **koohii-o** ~~nonda~~ ~~ka~~, **soretomo** ~~Taro-ga~~ **otya-o** nonda
T-Top coffee-Acc drank or or T-Nom tea-Acc drank
ka . (cf. 0))
or (Uegaki (2013: 4))

b. *Taro-wa **koohii** (ka), **soretomo** **otya(**-no dotti)-o nonda no? (cf. 0))

Based on the assumption that *soretomo* 'or' conjoin CPs and Uegaki's (2013) claim that (7a) is derived through ellipsis, the ellipsis approach to "nominal disjunction" like (7b) cannot explain the deviance of (7b). Thus we must treat "clausal disjunction" and "nominal disjunction" as having different sources.

Second, the Japanese equivalent of the English AltQ (5a), in which *ka* 'or' connects two NPs (8), is unambiguously a Yes/No Q. In contrast, when *ka* 'or' connects two clauses as in (1), the sentence is an AltQ. For a "nominal disjunction" to obtain an AltQ reading, *dotti* 'which' has to be used as in (3).

(8) Taro-wa [koohii **ka** otya]-o non-da no? (cf. (3))

The simplest conclusion we can draw from the fact is that while clausal-connective *ka* 'or' can make an AltQ by its own work, nominal-connective *ka* 'or' cannot (1) vs.(8), (3).

Next, let us turn to the possible forms of the two types of disjunction. As in (4), in "nominal disjunction" examples the second *ka* 'or' can be dropped like *Taro-wa [jyotyuu **ka** ryoorinin __ ]-o sagasite iru*. In contrast, in general the "clausal disjunction" examples do not allow this option. Dropping the second *ka* 'or' either leads to becoming a Yes/No Q (9) or complete unacceptability (10).

(9) Taro-wa koohii-o non-da **ka** (soretomo) otya-o non-da? (cf. (1))
'Is it the case that Taro drank coffee or drank tea?'

(10) [John-ga hasit-ta **ka**] [Mary-ga koron-da *(**ka)**] da. (cf. (2))

We have shown that the two types of disjunction seem to have different sources.

**[Proposal]** The main proposal of this presentation is that "nominal disjunction" is not derived from "clausal disjunction" through ellipsis. As for the specific differences between the two *ka*'s, one possibility is to adopt the analysis proposed by Erlewine (to appear) for the Mandarin Chinese disjunction *háishi* and *huòzhe*, which give rise to only the AltQ reading and only the Yes/No Q reading respectively. Erlewine claims, based on Beck & Kim (2006), that the former projects only the focus semantic value, which is the set of alternatives and gives rise to the AltQ reading. On the other hand, *huòzhe* has an ordinary disjunction meaning, namely the union, so the use of the item derives the Yes/No Q reading. However, adopting the analysis as it is in order to explain the behavior of the two *ka*'s is not possible. If the present claim that the nominal-connective *ka* 'or' directly takes a nominal is correct, the property assigned for *ka*, namely the union, cannot handle a nominal. In order to solve the problem, I propose that the function of both the clausal-connective *ka* 'or' and the nominal-connective *ka* 'or' is to make a set which consists of the alternatives introduced by *ka* 'or' (cf. Alonso-Ovalle (2006)). I claim that the AltQ reading in (3) arises by the work of *dotti* 'which' and that a covert version of it always exists in "clausal disjunction" while it does not in

"nominal disjunction". The fact that the second *ka* 'or' cannot be elided also comes from the morphosyntactic property of "clausal disjunction".

**[Supporting Evidence]** In Japanese, the coordinate particle has two different forms according to what category the particle connects: *to* for NP-coordinates and *te* for coordinates other than NP. See (11).

(11) a. Taro-wa koohii **to** otya-o nonda. (NP coordination)
T-Top coffee and tea-Acc drank

b. Taro-ga keeki-o yai-**te** Hanako-ga otya-o ireta. (clausal coordination)
T-Nom cake-Acc bake-and H-Nom tea-Acc put.in(Past)

It is natural for the Japanese disjunction also to have clausal-connective *ka* and nominal-connective *ka*.

**[Consequence]** Larson (1985: 218) gives the three readings in (12a-c) for the *either…or…* construction in terms of the scope relation between the indefinite noun and the predicate.

(12) Mary is looking for **either** a maid or a cook.
a. Mary is looking for ((a maid) or (a cook)). (*de dicto* reading)
b. for some x, a maid or a cook, Mary is looking for x. (*de re* reading)
c. Mary is looking for (a maid) or Mary is looking for (a cook). ("sentential-connective" reading)

The Japanese counterpart of (12) contrasts with the English data in that in any form of (4), the sentential-connective reading (12c) is quite difficult to get. Under the present proposal, this difference is explained straightforwardly. The *ka* used in (4) is a nominal-connective *ka* 'or' and since the clausal-connective *ka* 'or' directly derives the sentential-connective reading, it is blocked for (4).

**Selected References [1]** Alonso-Ovalle, Luis (2006) *Disjunction in Alternative Semantics*, doctoral dissertation, University of Massachusetts. **[2]** Erlewine, Michael Yoshitaka (to appear) "Alternative Questions through Focus Alternatives in Mandarin Chinese," to appear in *CLS 48*. (available at http://mitcho.com/academic/erlewine-cls48-preprint.pdf) **[3]** Han, Chung-Hye and Maribel Romero (2004) "The Syntax of *Whether*/Q…*or* Questions: Ellipsis Combined with Movement," *NLLT* 22, 527-564. **[4]** Kishimoto, Hideki (2013) "Nihongo no Toogo Koozoo" (The Syntactic Structure of Japanese), *Sekai ni Muketa Nihongo Kenkyuu* (Studies of Japanese to the World), ed. by Yoshio Endo, 15-43, Kaitakusha, Tokyo. **[5]** Larson, Richard (1985) "On the Syntax of Disjunction Scope," *NLLT* 3, 217-264. **[6]** Uegaki, Wataru (2013) "Japanese Alternative Questions Are Disjunctions of Polar Questions," ms., MIT. (http://web.mit.edu/wuegaki/www/altq-paper.pdf )

**On Focus Marking and Predication in Non-verbal Copular Constructions in Polish (with Ample Reference to Hausa)**

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There are some intriguing similarities as well as interesting differences in the syntax of focus expressions and non-verbal copular constructions in the two genetically unrelated languages Polish and Hausa. Based on the insightful analysis of focus in Hausa offered in Green (2007), I propose an analysis of these similarities and discrepancies that, in a general sense follows Kiss's (2006) suggestion that 'focusing is predication'.

The two most prominent symmetries between Hausa and Polish are: (i) in both languages an optional lexical marker (called here, after Green (2007), a *focus marker* (FM)) designates a phrase for focus interpretation (*nē/cē* in Hausa, and *to* in Polish), as illustrated by (1) and (2) below:

(1) **gà mālàm** nē na mai dà littāfin
to teacher FM.m 1s.FOCPF return PART book.DD
'I returned the book **to the teacher'** (Green 2007:62)

(2) To **nauczycielowi** oddałem książkę.cop
FM teacher$_{DAT}$ returned1st.m. book
'I returned the book **to the teacher**' (It's **to the teac**her that I returned the book)

(ii) the same lexical item functions as a copula in non-verbal copular predicational (and equative) constructions, as in (3) and (4):

(3) Audù **ɗālìbī** nề
Audu student.m FM.m
'Audu is a **student'**. **(**Green 2007:140)

(4) Adam to student.
Adam$_{NOM}$FM student$_{NOM}$
'Adam is a **student**'.

Some further symmetries between Hausa and Polish are: (iii) both languages allow both in-situ and ex-situ contrastive/exhaustive focus, (iv) focus and topic can co-occur in a single clause, with a fixed topic>focus order, (v) in non-verbal predicational clauses subjects must be definite, (vi) subjects and predicates are not reversible in non-verbal predicational clauses (e.g. H.*ɗālìbī **Audù** nē/P.*student to **Adam** 'a student is **Audu**/**Adam**'), and others.

As for the differences, first of all, while a lexical focus marker uniformly follows a focused phrase in Hausa, then it always precedes it in Polish. Next, *nē/cē* in Hausa are morphologically marked for agreement in gender with the focused phrase, while there is no marking for agreement on Polish *to*. These two facts may be related to each other, if the structural relation of the focused phrase to the focus marker is specifier-head in Hausa, as postulated by Green (2007), while head-complement in Polish. Next, I will propose that the Polish focus marker probes into its c-commanding domain from a head of a higher projection, distinct from FocP. The difference in a structural position of focus markers with respect to focused phrases will be made responsible for another difference between Polish and Hausa: while *nē/cē* markers are always (post-) adjacent to focused phrases, a *to* marker need not be adjacent in cases when focus is preceded by a topic, as illustrated by the contrast between (5) and (6) below:

(5) To **Adam** naprawił samochód.
FM Adam repaired car.
'**Adam** repaired the car'. ('It was **Adam** that repaired the car')

(6) *To Adam naprawił **samochód**.
'Adam repaired **the car**'. ('It was **the car** that Adam repaired').

(7) Adam, to naprawił **samochód**.
Adam FM repaired car
'As for Adam, he repaired **the car**'

The reason for the required adjacency may be trivial for Hausa (given that the focus marker is a head, and the focused phrase – the specifier of the Focus Phrase, as in Green's analysis. The exempt from the requirement only for cases like (7) in Polish is more intriguing.

The explanation offered in the paper dwells on the structural difference in the left periphery underlying cases like (5) and (7). Thus, it is postulated, in agreement with Green's (2008) findings for Hausa, that the focus marker *to* is a grammaticalization of a non-verbal copula in Polish occurring in both predicational non-verbal clauses and in focus structures. It is further argued that it occupies the same structural position of a head of a projection dominating a TP or NP, as in (8) and (9), below.

(8) $[_{XP}$ YP [x [x *to*] $[_{TP}$ …]]]
(9) $[_{XP}$ YP [x [x *to*] $[_{NP}$ …]]]

The structure in (8) underlies examples like (7), while (9) represents clauses like (4). The parallelism between (8) and (9) finds support from the semantics of focus, which, along the lines proposed by Kiss (2006, 2007, 2010) represents "the main assertion in the sentence", and "is predicated of the background, the open sentence corresponding to the post-focus section of the clause" (Kiss 2007:76).

I thus disagree with the accounts (e.g. Bondaruk 2012) in which no correlation is found between the focal *to*, and a copular *to*, with the latter analyzed as an emphatic marker. The arguments for a unitary status of *to* are based on the facts of: (i) non-co-occurrence of a focus marking *to* with an alleged emphatic *to* in the same sentence, (ii) non-occurrence of emphatic *to* in left-dislocation non-verbal copular sentence, (iii) the lack of parallelism between wh-questions and emphasis contrasted with the observed parallelism between wh-questions and focus. As for the status of X in structures (8) and (9), I will argue that *to* is a head of a PredP in both (8) and (9), while the YP occupying the Spec. PredP position is a subject of predication, interpreted as topic by the interpretive component (cf. Baylin 2002, Citko 2008). Next, the pattern represented in (5), where *to* is obligatorily adjacent to a focused element, will be explained with reference to the mechanism of Reprojection (e.g. Donati (2006), Roberts (2011)).

**References**

Bailyn, J. 2002. "Overt predicators". *Journal of Slavic Linguistics* 10:23-52.
Bondaruk, A. 2011. *Copular clauses in English and Polish*.Lublin: Wydawnictwo KUL.
Citko, B. 2008. "Small clauses reconsidered: Not so small and not all alike". *Lingua* 118:261-295.
Donati, C. 2006. "On *Wh*-Head Movement," in L. Cheng & N. Corver (eds) *Wh-Movement: Moving On*. Cambridge, Mass.: MIT Press, pp. 21-46.
Green, M. 2006. *Focus in Hausa*.Oxford: Blackwell Publishing.

Krifka, M. 1992 “A compositional semantics for multiple focus constructions”, in Jacobs, J.,eds.,*Informationsstruktur und Grammatik*, Opladen, Westdeutscher Verlag, 17-53.
Kiss, K. 2006. Focusing as Predication. In *The Architecture of Focus*, eds. Valeria Molnár & Susanne Winkler, Berlin: Mouton de Gruyter
Kiss, K. 2007. “Topic and Focus: Two Structural Positions Associated with Logical Functions in the Left Periphery of the Hungarian Sentence”. In Féry, C., G. Fanselow, and M. Krifka (eds.): *The Notions of Information Structure*. 69–81.
Kiss, K. 2010. Structural focus and exhaustivity. In: Malte Zimmermann – Caroline Féry (eds) *Information Structure. Theoretical, Typological and Experimental Perspectives.* Oxford-New York, Oxford University Press, 64-88.
Roberts, I. 2011. “Head Movement and the Minimalist Program”, in Boeckx, C. *The Oxford Handbook of Linguistic Minimalism.* Oxford: OUP.
Rooth, M. 1997. "Focus." *The Handbook of Contemporary Semantic Theory*.
Lappin, S. (ed). Blackwell Publishing, 1997. Blackwell Reference Online.

**Mandarin-speaking Children's Interpretation of Disjunction in Verb Phrase Ellipsis (VPE) structures**

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Languages differ in the ways in which words for disjunction (English *or*, Mandarin *huozhe*) are interpreted in simple negative sentences. Disjunction generates a conjunctive interpretation in some languages (e.g., English) but it generates a disjunctive interpretation in other languages (e.g., Mandarin Chinese). One account of these cross-linguistic differences proposes that words for disjunction are positive polarity items (PPIs) in some languages (e.g., Mandarin), but not in other languages (e.g., English) (see Goro, 2004; Szabolcsi, 2002). By definition, Positive Polarity Items take scope over negation. Consequently, all languages should pattern in the same way when the polarity sensitivity of PPIs is cancelled (see Zhou & Crain, 2012).

One linguistic context that is expected to cancel the polarity sensitivity of PPIs is Verb Phrase Ellipsis (VPE). VPE structures are interpreted as if the syntactic structure of the elided VP is intact, although it is suppressed at Phonological Form. When disjunction is introduced covertly, as in an elided VP, it is not expected to take scope over local negation at the level of semantic interpretation (see Zhou & Crain, 2012). If VP ellipsis cancels the polarity sensitivity of disjunction (or any PPI), then disjunctive words are predicted to be assigned the same interpretation even in typologically distinct language such as Mandarin and English. More specifically, disjunction should generate a conjunctive interpretation in both languages, in accordance with one of de Morgan's laws of classical logic.

To test this theoretical prediction, Mandarin-speaking children and adults were tested using a Truth Value Judgment Task that was designed to assess subjects' interpretation of disjunction in negative statements both without VPE, as in (1), and with VPE, as in (2).

(1) Xiaolaoshu meiyou chi juanxincai huozhe xilanhua.
Mouse not eat cabbage or broccoli
'The mouse didn't eat cabbage or broccoli.'

(2) Gongzhu hui xuan xingxing huozhe beike, wangzi buhui.
princess will choose a.star or a.seashell prince will.not
'The princess will choose a star or a seashell, the prince will not.'

Mandarin-speaking children rejected sentences like (1) 86% of the time, whereas adults rejected these sentences only 7% of the time (i.e., in the context, the mouse ate broccoli, but not cabbage). The findings suggest that Mandarin-speaking children assigned a conjunctive (non-PPI) reading, whereas adults assigned a disjunctive (PPI) interpretation. These findings replicate those of previous studies (e.g., Jing, Crain & Su, 2005).

A second experiment investigated sentences like (2), with elided VPs. In the context for (2), the princess chose a seashell and the prince chose a star. As predicted, both Mandarin-speaking children and adults consistently rejected the target sentences (children = 90%, adults = 96%). This suggests that the covert disjunction in the elided VP in (2) generated a conjunctive reading both for children and for adults. Taken together, the findings from both experiments provide evidence that VPE structures cancel the polarity sensitivity of disjunction (or any PPI), thereby unveiling the same conjunctive interpretation for both children and adults.

The present findings bear on two theoretical proposals. First, the findings are consistent with the proposal that polarity sensitivity is a phonological process, which requires two expressions (e.g., negation and a PPI) to be spelled out at the level of phonetic form. Second, because disjunction is not phonetically realized in VPE structures, there is little decisive evidence in children's experience about how to analyse the covert disjunctive word in such structures. The fact that young children rapidly converge on the correct adult interpretation is difficult to reconcile on experience-based approaches to language acquisition and, instead, tends to favour approaches based on abstract linguistic knowledge.

**References**


Crain, S. & Thornton, R. (1998). Investigations in Universal Grammar: A guide to experiments on the acquisition of syntax and semantics. Boston: Massachusetts Institute of Technology.

Goro, T. (2004). The emergence of Universal Grammar in the emergence of language: the acquisition of Japanese logical connectives and positive polarity. University of Maryland at College Park: Unpublished ms.

Jing, C., Crain, S., Hsu, C.F. (2005). Interpretation of focus in Chinese: child and adult language. In Y. Otsu (ed.) Proceedings of the Sixth Tokyo Conference on Psycholinguistics. Tokyo: Hituzi Syobo Publishing Company, 165-190.

Szabolcsi, A. (2002). Hungarian disjunctions and positive polarity. In Istvan Kenesei & Peter Siptar (eds), Approaches to Hungarian, 8, vol. 8, 217–41. Budapest: Akademiai Kiado.

Zhou, P., & Crain, S. (2012). Focus and scope in child language. In Y.-O. Biq & L. Chen (Eds.), Proceedings of the 13th International Symposium on Chinese Language and Linguistics (IsCLL-13) (pp. 434-455). Taipei: National Taiwan Normal University.

**Comparison, Predication, and Lexical Semantics of PC Nouns in Telugu**

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By a thorough investigation of three classes of Property Concept (PC) (Dixon 1982) nominals in Telugu this paper establishes a link between the type of denotation (substance vs. indi- vidual characterizing) of PC nouns, the kind of predication they require (possessive vs. non- possessive), and the type of comparatives they occur in (bare vs. non-bare). It then confirms a more broad link between nominal categorization of PCs and a lexical semantics of substance. The dative experiencer construction in Dravidian also gets an explanation here, as a necessity of substance denotation requiring possessive predication, to achieve the right truth conditions.

**3 PC *noun classes based on asymmetry in predication***: Based on morphosyntactic properties, Telugu PC nouns can be divided into 3 classes, given in (1). ClassA nouns are derived from roots, as shown in (2). ClassM nouns can't occur in nominative predicate nominals, but only in dative predicate nominals. ClassA nouns can occur only in nominative predicate nomi- nals, but not dative. ClassU nouns can occur in both nominative and dative predicate nominals. This is shown in (3)-(4). The dative predicative construction is possessive, whereas the nomi- native predicative construction is non-possessive, as shown in (5)-(7), a paradigm of Dravidian.

(1) Class**M** *psych/somatic*: koopa**m** 'anger', daaha**m** 'thirst'
Class**U** *dimensio*n: ett**u** 'height', baruv**u**, 'weight'
Class**A** *color/physical*: erup**u** 'redness', mettan**a** 'softness'

(2) eru -pu
√red -ness
'redness'

(3) Sita erupu/ettu/*koopam/*aakali
Sita redness/height/anger/hunger
'Sita is red/tall/angry/hungry.'

(4) Sita-ki *erupu/ettu/koopam/aakali
Sita-dat redness/height/anger/hunger
'Sita is red/tall/angry/hungry.'

(5) Sita teacheru
Sita teacher
'Sita is a teacher.'

(6) idi biyyamu
this rice
'This is rice.'

(7) Sita-ki iddaru pillalu
Sita-dat two kids
'Sita has two kids.'

**P***roposal*: Following Francez and Koontz-Garboden (2013) (FKG) and Jenks *et al.* (2013), I take this contrast as diagnostic of a di*ff*erence in the lexical semantics of the PC nouns between: (i) abstract mass or substance denotations, and (ii) denotations which characterize individuals that have the substance in question. ClassM nouns are substance denoting and possession is semantically required for them to acheive truth conditions when predicated of an entity. ClassA nouns characterize the individuals that have a property and therefore need non-possessive mor- phosyntax. Class U nouns have both types of denotations (via a type-shift operation). The denotation of a ClassM noun is as given in (8), following FKG (here *p* is a variable over por- tions of abstract matter, and **anger** is a constant naming the substance of anger in the model).

(8) [*koopam*] = $\lambda p$[**anger**($p$)]

ClassA nouns denote relations between individuals and portions of substance to which they stand in the possessive relation, following Jenks *et al.* (2013). The roots they are derived from, as shown in (2), denote substances. The nominalization packs in the possessive relation between the substance and individuals who have it, as shown in (9). Here D is a variable over sets of portions, and $\exists^D$ is used to express restriction of the existential quantifier only to elements of D.

(9) [*err*] = **redness** $\subseteq$ **U**, **U** being a non-empty set of portions.
[*erupu*] = $\lambda x \lambda D.\exists^D z[\pi(x, z) \wedge$ **redness**($z$)]

**E***vidence*: **D***ifferences in bare comparatives and with intensifiers* In comparative constructions, ClassM nouns pattern with mass & count nouns in not occurring in bare comparatives (comparative without the so-called comparative marker, Schwarzchild to appear), as shown in (10)-(12), whereas ClassA nouns pattern with Hebrew (Schwarzchild to appear) and Hindi (Bhatt to appear) adjectives in that they occur in bare comparatives, as shown in (13). ClassU nouns cannot occur in bare comparatives as dative possessors, but can occur in bare comparatives as nominative non-possessive predication, as shown in (14)-(15).

(10) naaku ni-kanTe *(ekkuva) biyyam undi
I-DAT you-than *(more) rice is
'I have more rice than you.'

(11) naaku ni-kanTe *(ekkuva) carlu unayi
I-DAT you-than *(more) cars are
'I have more cars than you.'

(12) naaku ni-kanTe *(ekkuva) koopam undi
I-DAT you-than *(more) anger is
'I have more anger than you.'

(13) neenu ni-kanTe (*ekkuva) erupu
I-NOM you-than (*more) redness
'I am redder than you.'

(14) naaku ni-kanTe *(ekkuva) ettu undi
I-DAT you-than *(more) height is
'I am taller than you.'

(15) neenu ni-kanTe (*ekkuva) ettu
I-NOM you-than (*more) height
'I am taller than you.'

That ClassM PC nouns pattern with mass & count nouns in comparatives gets a ready explana- tion from the analysis that they have substance denotation just like mass nouns. The denotation of ClassA nouns as relations straightforwardly explains why ClassA PC nouns pattern di*ff*er- ently from mass & count nouns and like adjectives in languages like Hindi and Hebrew, since adjectives too denote relations, though between degrees and individuals.

As ClassA noun denotations have a portion argument, it can be saturated by a measure phrase. This is seen clearly with ClassU nouns, which type-shift between the two denotations, and which as relations allow measure phrases, but as substances do not allow measure phrases:

(16) *naaku aaru aDugulu ettu undi
I-DAT six feet height is
'I have 6ft in height.'

(17) neenu aaru aDugulu ettu
I-NOM six feet height
'I am 6ft tall.'

It also explains why with degree intensifiers without quantity denotation, ClassM and mass terms require the support of ekkuva 'much' (just like in comparatives), whereas ClassA do not, as shown in (18)-(19). I analyze ekkuva as a quantity term with no comparative semantics in it.

(18) siita-ki marii *(ekkuva) biyyam/koopam undi
Sita-DAT too much rice/anger is
'Sita has too much rice/anger.'

(19) siita marii (*ekkuva) erupu
Sita too much redness
'Sita is too red.'

All PC nouns are substance based: mixed subdeletion and equatives However, all the PC noun classes are built on a semantics of substance possession, whether directly as substances (ClassM), or indirectly as relations between individuals and substances (ClassA). Therefore, because of the type-theoretic match, they allow mixed comparative subdeletion (see (22)) and mixed equatives (see (20) and (21)) , with each other, and also with mass nouns (in (21)).

(20) siita enta erup(u)-oo daani-ki ant(a)-ee koopam kuuDaa undi
Sita how-much redness-DISJ her-DAT as-much-emph anger also is
'Sita is as angry as she is red.'

(21) diini-ki enta bangaaram und-oo idi ant(a)-ee erupu kuuDaa undi
This-DAT how-much gold is-DISJ this as-much-emph redness also is
'As much gold as it has, it has as much redness.'

(22) siita-ki enta koopam und-oo aame daani-kanT-ee erupu undi
Sita-DAT how-much anger is-DISJ she that-than-emph redness is
'Sita is more red than she is angry.'

This further strengthens the hypothesis in Jenks et al. (2013) that nominal encoding of PC terms always entails a semantics of substances. This is also confirmed by all the substance referring terms, from mass nouns to ClassA PC nouns, taking the same quantity term enta 'how much':

(23) vaaDi-ki en-ta koopam/biyyam/ettu undi?
him-DAT how-much anger/rice/height is
'How much rice/anger/height does he have?'

(24) idi en-ta erupu/ettu?
this how-much redness/height
'How red/tall is this?'

**Select References:**

Francez & Koontz-Garboden. 2013. Semantic variation and the grammar of property concepts.
Jenks et al. 2013. Basaa and the lexical semantics of property concept nouns.

**Chinese Symmetric and Asymmetric Passives: towards a unified approach**

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It is well known that double object constructions (DOC) do not all behave alike in the passive. In some, either of the objects can be passivized (the symmetric passive) while in others, only one object can take the subject role in the passive (the asymmetric passive). This symmetric-asymmetric pattern is found in Chinese indirect passives as well but not limited to the DOC pattern. As shown below, some passives allow both the direct object (DO) and the indirect object (IO) to rise to the subject position (as in (1)), while others only permit the IO to be passivized (as in (2)).

(1) Symmetric Passives:

a. naxie yifu yijing bei song-le qiongren.
those clothes-DO already bei give-PERF the.poor-IO
'*Those clothes has already been given the poor.'

a'. qiongren bei song-le yixie yifu.
the.poor-IO bei give-PERF some clothes-DO
'The poor were given some clothes.'

b. nafu hua yijing bei gua-le chufang.
that picture-DO already bei hang-PERF kitchen-IO
'*That picture has already been hung the kitchen.'

b'. chufang bei gua-le xuduo hua.
kitchen-IO bei hang-PERF many picture-DO
'??The kitchen was hung many pictures.'

c. hua bei jiao-le fei.shui.
flower-DO bei water-PERF waste.water-IO
'*The flower was watered the waste water.'

c'. fei.shui bei jiao-le hua.
waste.water-IO bei water-PERF flower-DO
'*The waste water was watered the flower.'

(2) Asymmetric Passives:

a. *yitiao tu bei baba kan-duan-le zhuozi
one-CL leg bei father chop-break-PERF table

a'. zhuozi bei baba kan-duan-le yitiao tui
table bei father chop-break-PERF one-CL leg
'The table has its one leg chopped off by my father. '

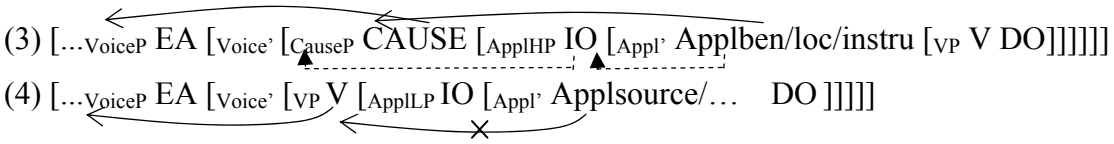
b. *yifen bei Adui xian de-le Bdui
1.point-DO bei teamA before get-PERF teamB-IO

b'. Bdui bei Adui xian de-le yifen.
teamB-IO bei teamA before get-PERF 1point-DO
'TeamB was affected by TeamA getting one point before it.'

The above sentences, especially (1), present challenges to the current analysis since they allow the lower object to climb over the higher one, which apparently violates the Minimal Link Condition.

Pylkkänen (2001, 2008) argues that there are two types of applicatives, which entail different semantic relations. I will show in this paper that the symmetry contrast between (1)

and (2) can be straightforwardly accounted for under the framework of applicatives and the Phase theory. Leaving details aside, I assume as illustrated in (3-4) that the IOs of Goal (as in the verb of *song* 'give'), Location (as in the verb of *gua* 'hang') and Instrument (as in the verb of *kun* 'bind') are introduced by **high applicatives in the symmetric passive**; while in the asymmetric passive, the subject is derived from the Spec of low applicative or middle applicative (cf. Tsai 2012).




One immediate payoff of this assumption is that it can provide a unified explanation for the distinction between the symmetric and asymmetric structures of Chinese passives: the high applicative can provide an 'escape hatch' specifier position for a lower argument, while the low applicative does not. Accordingly, a phase-EPP allows the direct object to shift over the IO, while that movement is forbidden in the low applicative (cf. McGinnis 2002).

Apart from this difference, an extra projection of Cause is introduced into the high applicative structure (as in (3)) in line with the causative nature (see more discussion in Harley 2002, Huang 2007, inter alia). In this paper, I will argue for a parallel analysis between the resultative construction and the symmetric passive (i.e., the derived verbal compound 'V-Appl-Cause' takes a small clause predicated by Appl as its complement) and part of the asymmetric passives (like (2a')).

In other words, another substantive merit of this proposal is that the assumption of applicative projection enables the two objects to get their Cases assigned separately by different predicates, *viz.*, by the Appl (or the resultatives) and the matrix Verb. This **bi-predicated (or bi-clausal)** hypothesis is not outlandish at all. In fact, Chinese data provides an ideal testing ground for this venture in that its linguistic expressions are often constructed analytically and many studies have tried to prove the existence of the implicit predicate, such as Shen & Sybesma (2010).

Take (2a') above, for instance, which shows that the indirect passive is predicated by a resultative verbal compound (RVC) *kan-duan* 'chop-break'. Following the small clause analysis proposed by Sybesma (1999) and Sybesma & Shen (2006), the resultative verb (V2) together with its arguments constitutes a small clause, which is in turn taken by the first verb of RVC as the complement. That is to say, the objects *zhuozi* 'table' and *tui* 'leg' in (2a') are supposed to be taken by the verb *kan* 'chop' and *duan* 'break', respectively.

It is worth noting that the syntactic structure of (2b') is a bit different from (2a'), since the passive subject *Bdui* 'TeamB' is not a legitimate object of the verb *de* 'get'. Nevertheless, this subject is deemed to be introduced by one individual ApplL head over VP (alike the proposal in Huang (1999) and Huang et al (2009) but I argue for a biverbal structure here). I will provide further instantiation to buttress this idea in the paper.

Summarizing thus far, I hope to show, in this paper, that a unification of symmetric passives and asymmetric passives under the applicative framework is not only feasible but also empirically supported. Specifically, it will be shown that all the so-called indirect passive does and needs to contain a gap, which is headed by either an implicit resultative verb or an Appl projection.

**Selected references**:

Huang, C.-T. James. 1999. Chinese passives in comparative perspective. *Tsing Hua Journal of Chinese Studies* 29: 423–509.

Huang, C.-T. James. 2007. Thematic Structures of Verbs in Chinese and their Syntactic Projections. *Linguistic Sciences* 29: 3-21.
Huang, C.-T. James, et al. 2009. *The Syntax of Chinese*. Cambridge: Cambridge University Press.
McGinnis, Martha. 2002. Object asymmetries in a phase theory of syntax. *Proceedings of the 2001 CLA Annual Conference*. Department of Linguistics, University of Ottawa.
Harley, Heidi. 2002. Possession and the double object construction, *Linguistic Variation Yearbook*, 2:31- 70.
Pylkkänen, Liina. 2008. *Introducing arguments*. Cambridge, MA: MIT Press.
Shen, Yang & Rint Sybesma. 2010. The derivational relation between the syntactic marker gei and several verbal constructions. *Zhongguo Yuwen* 336: 222-237.
Sybesma, Rint. 1999. *The Mandarin VP*. Dordrecht: Kluwer.
Tsai, W.-T. Dylan. 2012. High Applicatives are not high enough: A cartographic solution. Paper presented in 14th China International Conference on Contemporary Linguistics. Xi'an: Xi'an Foreign Language University.

**Korean Jussives and Point of View**

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**Nutshell:** We discuss properties of jussive clauses in Korean matrix and embedded clauses. Contrary to earlier work, jussives are not tied to person features (Miyagawa, 2009, Pak, 2006, Zanuttini *et al*., 2012), but rather are tied to a point-of-view (POV) and an Addressee operator.

**Jussives in Korean:** Jussives in Korean include imperatives, exhortatives and promissives, the latter being cross-linguistically rare. The following examples suggest that the subject of jussives is tied to particular grammatical persons (**π**).

(1) Chayk-ul ilk-e-la. **subject of imperative is 2nd π**
book-ACC read-SSP- IMP
'*Read the book!*'

(2) Chayk-ul ilk-ca. **subject of exhortative is 1st π incl**
book-ACC read-EXH
'*Let's read the book.*'

(3) Chayk-ul ilk-u-ma. **subject of promissive is 1st π incl or excl**
book-ACC read-SSP-PRM
'*I will read the book.*'

Consider, however, the behaviour of jussives in embedded clauses (Lee, 2012). Observe that the understood subject of an embedded imperative is the indirect object of the matrix clause. Likewise, the understood subject of an embedded exhortative is the indirect object and the subject of the matrix clause. Finally, the understood subject of an embedded promissive is the subject of the matrix clause.

(4) Jina[1]-ka Minswu[2]-eykey *e*[2] chayk-ul ilk-u-la-ko malhay-ss-ta
Jina-NOM Minsoo-DAT book-ACC read-SSP-IMP-CNJ tell-PST-DECL
'Jina told Minsoo[1] that he[1] should read the book.'

(5) Jina[1]-ka Minswu[2]-eykey *e*[1+2] chayk-ul ilk-ca-ko malhay-ss-ta
Jina-NOM Minsoo-DAT book-ACC read-EXH-CNJ tell-PST-DECL
'Jina[1] told Minsoo[2] that they[1+2] should read the book together.'

(6) Jina[1]-ka Minswu[2]-eykey *e*[1] chayk-ul ilk-u-ma-ko malhay-ss-ta
Jina-NOM Minsoo-DAT book-ACC read-SSP-PRM-CNJ tell-PST-DECL
'Jina told Minsoo that she will read the book.'

As Lee (2012) points out, the understood subject of embedded jussives differs from that of matrix jussives. When the subject of the embedded jussive is overt, it is obligatorily coreferential with the corresponding matrix argument. Consider the following example adapted from Lee (2012).

(7) Ku salam-i Inho-eykey [ku/caki-ka Swuni-lul towacwum-ma-ko]
DEM man-NOM Inho-DAT [he/SELF-NOM Swuni-ACC help-PRM-CNJ]
mal-ha-ess-ta
say-do-PST-DECL
'He[1] said to Inho that he[1/*2] would help Swuni.'

We dispense with an extended discussion of shortcoming of previous research and restrict ourselves to the following brief notes. The difference in interpretation between matrix and embedded jussives is problematic for Zanuttini *et al*. Also the possibility of overt embedded subjects in the embedded clause is problematic for Lee's control analysis. Also, problematic with Lee's control analysis is the possibility of subject control with overt objects. Although wellknown with English *promise*, such control constructions are marginal. The Korean promissives, however, would require rampant violations of the Minimal Distance Principle. Furthermore, exhortatives would require obligatory split control, a less than desirable state of affairs. **Point of View:** Chou (2012) argues for a syntactically encoded POV operator on the basis of Mandarin *what the hell* constructions, which express a negative attitude on the part of the speaker in matrix clauses and on the part of the matrix subject in embedded clauses. He assumes a POV operator high in the left periphery of the clause. We assume further an Addressee operator, since any given speech has not only a speaker, but also an addressee (see also Speas and Tenny, 2003). In matrix clauses the POV is always 1st person and the Addressee is always 2nd person. In embedded clauses, Chou proposes that the POV is determined by the minimal ccommanding subject. We assume that the embedded Addressee operator is determined by the minimal c-commanding indirect object. Thus, the POV and Addressee operators for (4) are as follows. The superscript numbers indicate which probe values which goal.

(8)$[_{CP}$ POV[1 π] ADR[2 ] $[_{TP}$ Jina[3π]$^{1}$ $[_{vP}$ $[_{VP}$ Minsoo[3 π]$^{2}$ $[_{CP}$ POV[3 π]$^{1}$ ADR[3 π]$^{2}$ … ]]]]]

**The Features of Jussive Heads:** Chou (2012) assumes that the attitude marker *daodi* in Mandarin has an unvalued POV feature to account for the properties of *what the hell* phrases in Mandarin. Likewise, we argue here for the following unvalued features of Korean jussive heads. The imperative head *la* has the feature [*u*ADR]. The exhortative head *ca* has the features [*u*POV, *u*ADR], and the promissive head *ma* has the feature [*u*POV].

**Analysis:** With the above mechanisms in place we can understand the properties of Jussives illustrated above. We give below the derivations for imperatives, exhortatives, and promissives; (4), (5), and (6), respectively (embedded clauses shown only for space). As above, the superscript numbers indicate which probe values which probe.

(9) … $[_{CP}$ POV[3 π]$^{1}$ ADR[3 π]$^{2}$ IMP[*u*ADR:3 π $^{2}$]… ]
(10) … $[_{CP}$ POV[3 π]$^{1}$ ADR[3 π]$^{2}$ EXH[*u*ADR:3 π $^{2}$, *u*POV:3 π $^{1}$]… ]
(11) … $[_{CP}$ POV[3 π]$^{1}$ ADR[3 ]$^{2}$ PRM[*u*POV:3 π $^{1}$]… ]

Next, we assume that the phi probe of the C head is inherited by the T head (Chomsky, 2001, 2004, 2008). In non-jussive clauses, this phi probe is unvalued and uninterpretable, and receives a value from the subject in SpecTP. In the jussive clauses considered above, the person feature of the phi probe is already valued. To avoid a feature class, the corresponding subject of the TP of the jussive clause must match. Finally, this analysis presents no problems for the presence of overt embedded subjects in jussives.

**Summary:** We have proposed a unified analysis for matrix and embedded jussives in which the formal features of the jussive markers are uniform for both matrix and embedded clauses. This improves on earlier approaches that relied on shiftable features (Zanuttini, Pak & Portner) and control (Lee). Our analysis does not posit any new mechanisms, but rather makes use of Agree and POV/Addressee operators, where the POV operator has been independently argued for.

**References**

**Chomsky, N.** 2001. Derivation by Phase. In *Ken Hale: A Life in Language*, ed. M. Kenstowicz, 1-52. Cambridge, MA: MIT Press. **—.** 2004. Beyond Explanatory Adequacy. In *The cartography of syntactic structures*, ed. A. Belletti. Oxford: OUP. **—.** 2008. On Phases. In *Foundational Issues in Linguistic Theory*, ed. P. Oltero, 133 - 66. Cambridge, MA: MIT Press. **Chou, C.-T. T.** 2012. Syntax-Pragmatics Interface: Mandarin Chinese Wh-the-hell and Point-of-View Operator. *Syntax* 15:1-24. **Lee, H.** 2012. Property of the Jussive Head in Korean Jussives. *Studies in Generative Grammar* 22:263-302. **Miyagawa, S.** 2009. *Why Agree? Why Move?* Cambridge, MA: MIT Press. **Pak, M.** 2006. Jussive Clauses and Agreement of Sentence Final Particles in Korean. *J/K Ling* 14:295-306. **Speas, P., and Tenny, C.** 2003. Configurational Properties of Point of View Roles. In *Asymmetry in Grammar, Volume 1: Syntax and Semantics*, ed. A.-M. DiSciullo, 315-44. Amsterdam, Netherlands: Benjamins. **Zanuttini, R., Pak, M., and Portner, P.** 2012. A Syntactic Analysis of Interpretive Restrictions on Imperative, Promissive, and Exhortative Subjects. *NLLT* 30:1231-74.

**A Phase-based Account of Punjabi Differential Subject Marking**

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In this paper, we take issue with a prominent approach to Differential Subject Marking/DSM that considers it as a reflection of the subject's position on the Person/Animacy Hierarchy (Silverstein, 1976 and Aissen, 1999, 2003). We illustrate, drawing on novel data from an Indo-Aryan language Punjabi, that DSM effects are not determined by animacy/agentivity parameters. Punjabi shows DSM effects in the ergative domain in perfective structures: while 3rd person subjects are marked with an ergative *–ne*, 1st/2nd person subjects are left unmarked (1).

| | | | | |
|---|---|---|---|---|
| 1. | *mɛ̃ (*ne)/ ʈu(*ne)/o-ne* | | *rottii* | *khaaɖɖii* |
| | 1.sg(*erg)/ 2.sg(*erg)/3.sg-erg | | bread.f.sg | eat.perf.f.sg |
| | 'I /You/(s)he ate bread.' | | | |

We claim that person-triggered DSM effects (1) emerge from the interplay of 1st/2nd person subject's feature checking requirements and the cyclic nature of syntactic operations. Our phase-based analysis moves these subjects outside the theta-(vP) domain, thereby preventing them from receiving the inherent ergative from v. The proposed alternative concurs, albeit with some non-trivial differences, with recent attempts (cf. Merchant, 2006; Alexiadou & Anagnostopoulou, 2006; Coon and Preminger, 2012) at explaining DSM effects as epiphenomena of narrow syntactic operations.

To start, a popular account for DSM is presented in Silverstein (1976) and also in Aissen (1999, 2003) in Optimality Theory terms. This account considers DSM effects to be reflections of the arguments on the person/animacy hierarchy (2): 1st/2nd person subjects, in contrast to 3rd person subjects, are assumed to be natural agents, and hence left unmarked.

| | | |
|---|---|---|
| | Inanimate 3 ERG | Animate/Agent 1/2 NOM |
| 2. | <========== | ==========> |

The association between animacy/agentivity and case-marking has been criticized by many scholars including Jelinek (1993) and Alexiadou and Anagnostopoulou (2006). The Punjabi data below poses similar concerns: 3rd person ergative subjects are as agentive (as indicated by the presence of the volitional adverb) as the unmarked 1st/2nd subjects (3).

| | | | | | |
|---|---|---|---|---|---|
| 3. | *mɛ̃/ʈu/o-ne* | *jaan-ke* | *tebal-nũũ* | *baahr* | *rakhyaa* |
| | 1.sg/2.sg/3.sg-erg | deliberately | table-acc | outside | keep.perf.m.sg |
| | 'The boy kept the table outside deliberately.' | | | | |

Additionally, this approach presupposes that unmarked subjects are necessarily nominative (implying that they enter into case-agreement relations with T). This is problematic since Punjabi unmarked 1st/2nd person subjects in the perfective behave differently from nominative subjects in the imperfective. One crucial difference between the two is that while full phi agreement on the verb is obligatory with nominative subjects,

unmarked 1st/2nd person subjects cannot trigger agreement with the verb, which instead agrees with the object in number and gender (4-5). We take this contrast to indicate that unmarked 1st/2nd person subjects are not nominative.

4. *mẽ /ʈu /o* *rotti* *khããɖaa* *ãã/ ẽ/ e*
   1.sg-nom/2.sg-nom/3sg.-nom bread.f.sg eat.hab.m be.pres. 1.sg/2.sg/3.sg
   'I /you/he eat(s) bread.'
5. *mẽ/ʈu* *rottii* *khaaɖɖii*
   1.sg/2.sg bread.f.sg eat.perf.f.sg
   'I /You ate bread.'

A second line of research on DSM worth highlighting here treats it as an epiphenomenon of independent principles of grammar. Merchant's (2006) polyvalent case analysis is one such approach. He proposes a syntactic hierarchy (6), wherein 1st/2nd person subjects are multiple case-marked in the course of the derivation by two heads- ergative by v and nominative by T, on their way to the 1/2 person projection. 3rd person subjects remain in spec, vP with ergative case.

6. [1/2 [3 [PN [Def/Spec [Indef/Spec [Indef/Nonspec [vP…]]]]]]]

The first drawback of this analysis is that it demands a redefinition of Agree (Chomsky, 2000, 2001), which deactivates a case valued DP for further syntactic (case/agreement) operations. Moreover, if extended to Punjabi, the polyvalent case analysis incorrectly predicts that the unmarked 1st/2nd person subjects are underlying ergative subjects (also see Legate 2012, 2013) with an extra structural nominative, and hence should display the same syntactic behavior as nominative and ergative subjects. Punjabi ergative facts do not support these predictions. 1st/2nd person subjects resist taking ergative marked adjectives, contra 3rd person ergative subjects (7-8). Further, they are different from the nominative subjects as illustrated by the contrast in (4-5).

7. *oss* *vecaare-ne* *kii* *kar* *ɖiʈʈaa*
   3.sg-obl poor.m.sg.obl-erg what do give.perf.m.sg
   'What has he, poor thing, done?'
8. *mẽ /ʈu* *vecaaraa /vecaare/*vecaare-ne* *kii* *kar* *ɖiʈʈaa*
   1.sg/2.sg poor.m.sg.nom/obl./*erg what do give.perf.m.sg
   'What have I/you poor thing done?'

Our alternative analysis extends on the DSM as an epiphenomenon approach, but avoids multiple case-checking of DPs. It also distinguishes between ergative, nominative and 1st/2nd person subject marking by proposing that the latter are case-valued by a head, different from v and T. We propose a double vP structure (9) for all perfective structures, where the higher v1 is a perfective aspect head with an incomplete set of uninterpretable features (minus person), while v2 is a phi-complete head.

9. [TP[voiceP [v1P [v2P Ext Arg v2] v1] voice ]T]
Phase Spell-Out domain

We claim that in (9), v2 to v1 phase sliding (à la Gallego, 2010) takes place, with the following results (i) v1P becomes a phase (Chomsky, 2001, 2004) and (ii) v2P, the complement is spelled out when the higher C-T phase head is introduced. The v2-v1 complex agrees with the internal argument and values it accusative. 3rd person subjects remain inside v2P and get an inherent ergative from the theta assigning v2; they are prevented from targeting spec, v1P by anti-locality considerations (Abels, 2003 and Grohmann, 2003). 1st/2nd person subjects however have a D-feature that must be checked against an appropriate head. This allows them to override the anti-locality requirement and raise to the edge of v1P phase, thereby becoming accessible to higher heads. They then target the specifier of a voice head that values them with an oblique case as well as licenses their person feature.

In the end, our phase-based analysis succeeds in deriving the DSM facts of Punjabi derivationally in the narrow syntactic component, without postulating ad hoc animacy/agentivity hierarchies. Additionally, it analyzes the facts without bringing radical changes to the theoretical apparatus. A cross-linguistic implication of our proposal is that it accounts for the lack of person-triggered DSM effects in typological related languages like Hindi-Urdu by assuming that all Hindi-Urdu subjects, irrespective of person, are licensed within the theta-assigning v2P domain in the perfective. 1st/2nd person subjects are thereby also marked ergative by v2.

**Selected references**: Aissen, J. 1999. Markedness and subject choice in Optimality Theory. *NLLT* 17. Gallego, A. 2010. *Phase Theory*. John Benjamins. Merchant, J. 2006. Polyvalent case, geometric hierarchies, and split ergativity. Proceedings of the 42nd CLS. Silverstein, M. 1976. Hierarchy of Features and Ergativity. In *Grammatical Categories in Australian Languages*.

**The Locus of Case for Verb Compounds in Japanese**

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Compound verbs, where two lexical verbs are put together into one morphologically, are found in many Asian languages. Japanese also abounds with compound verbs (see e.g. Kuno 1978). Compound verbs are often claimed to be divided into syntactic and lexical compounds (Kageyama 1993). Syntactic compounds are of particular interest, because they have syntactically transparent structures where the first verb is embedded under the second verb. The syntactic structures obtained in syntactic compound verbs pose a number of theoretical challenges, and this paper takes up the question of why some, but not all, syntactic compound verbs allow direct passivization on the second verb, which does not select arguments, as seen in (1).

(1) a. *Kono-hon-ga yomi-owar-are-ta.
this-book-NOM read-end-PASS-PAST
(Lit) 'This book was stopped reading.'
b. Kono-hon-ga yomi-naos-are-ta.
this-book-NOM read-fix-PASS-PAST
'This book was read again.'

This fact has been noted since 1990's. Kageyama (1993) and Nishiguchi (1993) attempt to account for the (un)availability of direct passivization on the second verb in terms of a syntactic constraint on movement, i.e. the minimality condition (Rizzi 1990), arguing that when A-movement of an object a subject position is blocked in the presence of an intervening element (PRO), passivization fails. This analysis is called into question, however, given that two types of passive clauses can be formed from ditransitive verbs.

(2) a. Kodomo-ga omotya-o atae-rare-ta.
child-NOM toy-ACC give-PASS-PAST
'The child was given a toy.'
b. Omotya-ga kodomo-ni atae-rare-ta.
toy-NOM child-DAT give-PASS-PAST
'The toy was given to the child.'

If minimality is relevant for A-movement, one of the direct passive clauses in (2) should not be available. The well-formedness of the two passive forms in (2) suggests then that A-movement in Japanese is not constrained by minimality.

In this paper, I propose, as an alternative account, that case rather than movement determines the behavior of direct passivization applying to the second verbs in (1), as depicted in (3).

(3) a. *[$_{TP}$ SUBJ [ OBJ $\underset{[+ACC]}{V1}$ ] V2 - PASS]

b. [$_{TP}$ SUBJ [ OBJ V1 ] $\underset{[+ACC]}{V2}$ - PASS]

I claim that when the second verb has an accusative case feature to case license objects, as in (3b), passivization can apply to it, and that when it does not, passivization is not available, as in (3a). This means that when the second verb can suppress the case property of the first (transitive) verb, direct passivization should be made possible.

I will argue for the 'case' view by showing that compound verbs display the behavior akin to what is observed for passivization when the case properties of verbs are affected by certain syntactic operations that do not involve movement. One piece of evidence comes from the examples in (4).

(4) a. *Ken-ni gohan-ga tabe-owari-yasukat-ta.
Ken-DAT meal-NOM eat-end-easy-PAST
'It was easy for Ken to end in have a meal.'
b. Ken-ni kono-hon-ga yomi-naosi-yasukat-ta.
Ken-DAT this-book-NOM read-fix-easy-PAST
'It was easy for Kent to read this book again.'

The examples show that compound verbs show the same contrast in acceptability when the non-stative case arrays are changed to the stative ones by virtue of embedding them into *tough*-adejctives. Importantly, the grammatical relations are not altered by this type of embedding, as shown by the fact that the dative phrase in (5) serves as a subject.

(5) $\text{Ken}_i$-ni $\text{zibun}_i$-no kodomo-ga sikari-yasu-i.
Ken-DAT self-GEN child-NOM scold-easy-PRES
'It is easy for Ken to scold his children.'

Given that the patterns attested in *tough*-clauses in (4) are the same as those found in direct passive clauses in (1), and that no A-movement takes place incurring a violation of minimality here, it is plausible to say that passivizability of the second verb should be determined whether the verb possesses a case feature to license an accusative argument.

Another type of argument can be derived from the fact that potential verb formation shows the same pattern as direct passivization.

(6) a. ?* Ken-ni zi-ga kaki-owar-e-ta.
Ken-DAT letter-NOM write-end-can-PAST
'Ken was able to finish writing the letters.'
b. Ken-ni zikanwari-ga kumi-naos-e-ta.
Ken-DAT class.schedule-NOM build-fix-can-PAST
'Ken was able to change the class schedule.'

Again, when compound verbs are turned into potential forms, no A-movement is involved. In potential verb formation, unlike direct passivization, no promotion of an object into a subject takes place, and only the case marking change is shared by direct passivization. In the light of this fact, I claim that passivizability on the second verb depends on case rather than a movement constraint.

The present discussion brings to light the important fact that passivization affecting case properties can be instantiated only locally, i.e. when the second verb of compound verbs has a case feature, passivization can apply to it, but when the second verb does not have a case feature, passivization is not possible. Since the first verbs of syntactic compound verbs select arguments, the facts regarding compound verbs reveal that when the second verb behaves like an ECM verb while possessing a case feature, passivization can be applied to it, allowing an object, which is selected by the first, but not the second verb, to be promoted to the passive subject.

**Selected References**

Kageyama, Taro (1993) *Bunnpoo-to Gokeisei*, Hituzi Syobo, Tokyo.
Kuno, Susumu (1978) *Shin Nihon Bunpoo Kenkyuu,* Taishukan, Tokyo.
Nishigauchi, Taisuke (1993) "Long Distance Passive," *Japanese Syntax in Comparative Grammar*, ed. by Nobuko Hasegawa, 79-114, Kurosio, Tokyo.
Rizzi, Luigi (1990) *Relativized Minimality*, MIT Press, Cambridge, MA.

**Comparisons with/without Degrees in Nuosu Yi**

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**Empirical puzzles:** In Nuosu Yi (Lolo-Burmese, Tibeto-Burman, a SOV language), a limited number of dimensional adjectives such as *tall* or *wide* have an equative form, which semantically corresponds to the *as…as* construction in English, as shown in (1) and (2). We refer to adjectives like *a$^{34}$ʑɿ$^{33}$* in (1) as 'positive adjectives' (PAs), and those like *ʑɿ$^{21}$* in (2) as 'equative adjectives' (EAs). The EA *ʑɿ$^{21}$* in (2) morphologically differs from the PA *a$^{34}$ ʑɿ$^{33}$* in (1) in the absence of the prefix *a$^{34}$-* and a tonal difference from 33 to 21.

(1) a$^{33}$ʑi$^{55}$ li$^{33}$ **a$^{34}$ ʑɿ$^{33}$**. [PA]
Ayi top tall
'Ayi is tall.'

(2) a$^{33}$ ʑi$^{55}$ a$^{55}$ kɔ$^{33}$ **ʑɿ$^{21}$**. [EA]
Ayi Aguo as tall as
'Ayi is (at least) as tall as Aguo.'

Interestingly, both EAs and PAs can be used to form 'degree' constructions in Nuosu Yi, including exclamatives/degree questions, comparatives and equality constructions that express '*exactly* as Adj as', but in different ways. Below let us look at their differences.

Exclamative/degree questions. Consider the example in (4) first. (4) shows that we can add the *wh*-word *khɯ$^{21}$* 'how' directly in front of an EA to form a degree question or an exclamative. However, for PAs, it is necessary to add an adverbializer *mu$^{33}$* to mediate between *khɯ$^{21}$* and the adjective, as shown in (3). Importantly, (3), unlike (4), lacks an interrogative reading; it can only be interpreted as an exclamative. (The 34 tone of ʑɿ$^{34}$ in (4) is due to a tone sandhi rule.)

(3) a$^{33}$ ʑi$^{55}$ **khɯ$^{21}$** **mu$^{33}$** ndzɻa$^{55}$. [PA]
Ayi how ADVL pretty
(i) 'How pretty Ayi is!' (ii)*'How pretty is Ayi?' (*Impossible reading*)

(4) a$^{33}$ ʑi$^{55}$ (ko$^{21}$ po$^{33}$) **khɯ$^{21}$** ʑɿ$^{34}$. [EA]
Ayi body how as tall as
(i) 'How tall is Ayi?' (ii) 'How tall Ayi is!'

Comparatives. The comparative construction for PAs, exemplified in (5), has the standard of comparison, *a$^{55}$kɔ$^{33}$*, introduced by the intransitive verb *a$^{21}$tshɳ$^{33}$* 'to exceed' in an adverbial clause marked by the adverbializer *mu$^{33}$*. In the corresponding construction for EAs, as shown in (6), *a$^{21}$tshɳ$^{33}$* immediately follows the adjective without the mediation of the adverbializer *mu$^{33}$*.

(5) a$^{33}$ʑi$^{55}$ [a$^{55}$kɔ$^{33}$ tɕo$^{34}$ a$^{21}$tshɳ$^{33}$] **mu$^{33}$** a$^{34}$ ʑɿ$^{33}$. [PA]
Ayi Aguo toward exceed ADVL tall
'Ayi is taller than Aguo.'

(6) a$^{33}$ ʑi$^{55}$ a$^{55}$ kɔ$^{33}$ ʑɿ$^{21}$ a$^{21}$ tshɿ$^{33}$. [EA]
Ayi Aguo as tall as exceed
'Ayi is taller than Aguo.'

(6) differs from (5) in that only the former allows a differential to describe the difference between two entities under comparison, as shown by the contrast between (7) and (8):

(7) *a$^{33}$ʑi$^{55}$ **ȵi$^{21}$ko$^{33}$vɛ$^{33}$** a$^{55}$ kɔ$^{33}$ tɕo$^{34}$ a$^{21}$ tshɿ$^{33}$ mu$^{33}$ a$^{34}$ ʑɿ$^{33}$. [PA]
Ayi 2 cm Aguo towards exceed ADVL tall

(8) a$^{33}$ ʑi$^{55}$ **ȵi$^{21}$ko$^{33}$vɛ$^{33}$** a$^{55}$ kɔ$^{33}$ ʑɿ$^{21}$ a$^{21}$ tshɿ$^{33}$. [EA]
Ayi 2 cm Aguo as tall as exceed
'Ayi is (at least) 2cm taller than Aguo.'

<u>*exactly*</u> <u>as Adjective as</u>: For PAs, the equality construction that expresses 'exactly as Adj as' comprises a plural subject, a verbal predicate—*dʑɿ$^{33}$su$^{34}$* 'to resemble each other'—marked by the adverbializer *mu$^{33}$*, and a PA, as shown in (9). For EAs, the construction has the reciprocal morpheme *dʑɿ$^{33}$* directly precede the adjective, as shown in (10).

(9) a$^{33}$ ʑi$^{55}$ si$^{33}$ ni$^{21}$ a$^{55}$ kɔ$^{33}$ **dʑɿ$^{33}$** **su$^{34}$** **mu$^{33}$** ndzo$^{55}$. [PA]
Ayi and Aguo RECP resemble ADVL pretty
'Ayi and Aguo are as pretty as each other.'

(10) a$^{33}$ ʑi$^{55}$ si$^{33}$ ni$^{21}$ a$^{55}$ kɔ$^{33}$ **dʑɿ$^{33}$** ʑɿ$^{34}$. [EA]
Ayi and Aguo RECP as tall as
'Ayi and Aguo are as tall as each other.'

The observation that emerges from the above comparison is that the 'degree' constructions for PAs all involve a modifying relation between an adverbial and an adjective, which is however absent in those for EAs. This raises the question: what is the difference between PAs and EAs that underlies such a distinction?

**Analysis.** We propose that PAs and EAs are semantically distinct. EAs are ambiguous between a transitive verb (of type <e, <e, t>>)(i.e., [[*zɿ$^{21}$*]] = λyλx$_{e.}$ height(y) ≥ height(x)) and a degree predicate (of type <d, <e, t>>)(i.e., [[*zɿ$^{21}$*]] = λd$_{d}$λx$_{e.}$ height(x) ≥ d). Given that *ʑɿ$^{21}$* can have a degree semantics parallel to adjectives in English, we can interpret the exclamative/degree question in (4) and the comparatives in (6) and (8) in the same fashion as their English counterparts—'*How tall is Ayi*?', '*How tall Ayi is*!', and '*Ayi is (2 cm) taller than Aguo*'. We attribute the absence of adverbializer *mu$^{33}$* in (4) and (6) to the specifier-head relation between *khɯ$^{21}$* and *zɿ$^{21}$* in (4) and the head-complement relation between *a$^{21}$ tshɿ$^{33}$* 'exceed' and *zɿ$^{21}$* in (6). We propose that PAs lack a degree argument; they are vague predicates of type <e, t>. The PA *a$^{34}$ʑɿ$^{33}$* 'tall' denotes a set of objects that are in the positive extension of *tall* in the context c.

(11) [[*a$^{34}$ʑɿ$^{33}$*]]$^{c}$ = λx. pos$_{c}$(tall)(x)

The role of the adverbials in the degree constructions in (3), (5) and (9) is to modify (or quantify over) the contextual parameter with respect to which the predicate is interpreted. In (3), *khɯ$^{21}$* is a modifier that restricts the domain of *ndzo$^{55}$* to objects that are pretty in the context, as shown in (12). On this analysis, (4) means: Ayi is pretty even compared to pretty

people, which exceeds the speaker's expectation (cf. Rett 2011). Because *ndʑa*$^{55}$ does not have a degree argument for *khɯ*$^{21}$ to quantify over, (3) cannot be interpreted as a degree question.

(12) $[[khɯ^{21}]]^c = \lambda P_{<c, <e, t>>}\lambda x.\ P(c')(x)$, where *c'* is just like *c* except that the comparison class in c' is{y: P(y) in c}.

Turning to the comparative in (5), the adverbial clause marked by *mu*$^{33}$ existentially quantifies over the contextual parameter. It indicates that the context *c* can be precisified in such a way that the subject (i.e., Ayi) falls in the positive extension of *P* and the standard of comparison (i.e., Aguo) falls in the negative extension, as shown in (13).

(13) $[[a^{55}kɔ^{33}\ tɕo^{34}\ a^{21}tshŋ^{33}]]^c = \lambda P_{<e, t>>}\lambda x \exists c' \in$precisifications(c)$[P(c')(x) \wedge \neg P(c')$(Aguo)$]$

The adverbial *dʑŋ*$^{33}$*su*$^{34}$ *mu*$^{33}$ in the equality construction in (9) contributes a universal quantification over the contextual parameter. It indicates that for any pair of individuals <x, y> contained in the extension of the plural subject, every precisification of *c* that renders *x* in the positive extension of *P* also renders *y* in the positive extension, and vice versa, as shown in (14).

(14) $[[dʑŋ^{33}su^{34}]]^c = \lambda P_{<c, <e, t>>}\lambda Z \forall x,\ y[[x \in Z \wedge y \in Z] \rightarrow \forall c' \in$precisifications(c)$[P(c')(x) \leftrightarrow P(c')(y)]]$

**References** [1] Klein, E. 1980. A semantics for positive and comparative adjectives. *Linguistics and Philosophy* 4(1): 1-46. [2]Rett, J. 2011. Exclamatives, degrees and speech acts. *Linguistics and Philosophy* 34: 411-442.

**Dependency-length Effects in Japanese Gapless Relative Clauses**

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How the parser forms various linguistic dependencies in real time is one of the major issues in sentence processing research. In the literature, it has been observed that the parser takes more time to process sentences when the dependency length increases (*the locality / length effects*, Gibson, 1998, Grodner & Gibson, 2005, etc.). On the other hand, in some head-final languages (German, Hindi, Japanese), similar types of the length effects do not emerge (*the anti-locality effects*, Vasishth & Lewis, 2006, Konieczny, 2000). Moreover, it has been shown in Japanese that the dependencies with *wh*-phrases and NPIs (NP-*shika* 'only') exhibit length effects, while those with referential NPs do not (Nakatani & Gibson, 2008, Ono & Nakatani, 2010). The current study provides yet another empirical finding that dependencies between a universal quantifier and a bound pronoun also show length effects, supporting a generalization (holds at least in head-final languages) that quantificational elements are sensitive to the dependency length.

Based on the length effects observed with *wh*-phrases and NPIs, Ono & Nakatani (2010) put forward a hypothesis that only quantificational elements, but not referential NPs, show length effects because of their semantic properties (i.e., being a generalized quantifier). Alternatively, one could argue that *wh*-phrases and NPIs are sensitive to the dependency length because they make a specific prediction about the verb form; for example, the presence of a *wh*-phrase / NPIs leads the parser to predict a Q-particle *ka* / a negation to appear at the closest verb, respectively. Since those hypotheses have not been tested against each other so far, we examined which hypothesis makes a correct prediction, using dependencies between a universal quantifier and a bound variable.

In Experiment 1, we conducted a self-paced reading experiment (N=26), using a gapless relative clause whose head noun is a universal quantifier (*dono N-mo* 'every N'), and the position of a genitive pronoun (*soko-no* 'their') was manipulated so that the pronoun was attached either to the subject or to the object inside the relative clause. This pronoun in those positions is preferably bound by the universal quantifier (see some related properties in Hoji (1991, 1995), Aoshima, et al. (2009)). A sample set of materials is shown in (1) ((a) 'pronoun in subject' condition vs. (b) 'pronoun in object' condition).

(1) a. ... [soko-no daiku-ga ∅-kentikusi-o sitatteiru] dono-koomuten-mo ...
b. ... [∅-daiku-ga soko-no kentikusi-o sitatteiru] dono-koomuten-mo ...
[{their/∅}-carpenter-nom {∅/their}-designer-acc worship] every construction company
'every construction company where {their/the} carpenter worship {the/their} designer ...'

The results showed that the reading time at the relative clause head (a universal quantifier) was reliably slower in the (a) 'pronoun in subject' condition (1194 ms) than the (b) 'pronoun in object' condition (1094 ms) ($F_1(1,25)=6.45$, $p<.02$; $F_2(1,21)=7.76$, $p<.01$), suggesting that the structure with a shorter dependency length was preferred. Although the results were consistent with the hypothesis proposed by Ono & Nakatani (2010), there is a possibility that the preference for the (b) condition emerged due to the dislike for the existence of a bound pronoun at the beginning of the relative clause in (a). Therefore, Experiment 2 was carried out in order to avoid any clause-initial effects.

In Experiment 2 (N=22), the materials used in Experiment 1 were modified so that the genitive pronoun (again, *soko-no*) was now attached to either the dative object or the accusative object in the relative clause. In order to control animacy factor between the dative

and accusative object, the causative form of the verb was used in the relative clause. A sample set of materials is shown in (2) ((a) 'pronoun in the dative object' condition vs. (b) 'pronoun in accusative object' condition).

(2) a. ... [entyoo-ga soko-no zyuui-ni ∅-siikuin-o tyuui-saseta] dono-doobutuen-mo ...
b. ... [entyoo-ga ∅-zyuui-ni soko-no siikuin-o tyuui-saseta] dono-doobutuen-mo ...
[director-nom {their/∅}-vet-dat {∅/their}-zoo.keeper-acc warn-made] every zoo
'every zoo where the director made {their/the} vet warn {the/their} zoo keeper ...'

The results showed that the reading time slowdown at the relative clause head was observed in the (a) 'pronoun in the dative object' condition (1435 ms), compared to the (b) 'pronoun in the accusative object' condition (1315 ms) ($F_1(1,24)=4.77$, $p<.04$; $F_2(1,21)=.68$, $p=.42$). The reading time pattern observed in Experiment 2 was similar to the one in Experiment 1 in that the sentences with a short dependency were read faster.

The overall pattern of the results from two self-paced reading experiments indicated that the dependency between a universal quantifier and a bound pronoun is sensitive to the dependency length; in other words, a shorter dependency is preferred by the parser. This result supports the hypothesis put forward by Ono & Nakatani (2010) that only quantificational elements exhibit length effects. So long as this account is on the right track, the current result suggests that the working memory system which interacts with the sentence processing system handles quantificational and referential elements in some different manners (cf. Gibson, 1998). Moreover, the findings in the current study indicate that the length effects observed with *wh*-phrase and NPIs in Japanese were not driven by the fact that those elements require their licensing verb to have a specific form. Since the universal quantifier used in the current study does not require any specific form of the verb at all, the prediction based on the hypothesis with respect to the verb form was not borne out.

There is another important consequence of the current results with respect to the previously known preference on subject relative clauses over object relative clauses. A number of studies on Japanese/Korean sentence processing found that subject relative clauses are processed faster than object relative clauses (e.g., Miyamoto & Nakamura, 2003, Ueno & Garnsey, 2008). It could be argued that there is a positional advantage on subject relative clauses (i.e., being higher in the structure) that has a major impact on the processing of dependency in the relative clauses, but recently a number of other not purely structural factors have been suggested for the subject relative clause preference (Roland, et al., 2012; Gennari & MacDonald, 2009); for instance, due to the lack of an overt subject, the parser could notice the existence of the relative clause earlier in the subject relative clauses. Notice that the materials used in our experiments were free from those potential confounding factors associated with the subject relative clause preference because all argument NPs are present in the relative clause. The current results suggest that the previously noticed preference for the subject relative clauses may not stem from the processing cost associated with the structural factors per se.

In sum, we have shown that the dependency between a universal quantifier and a bound pronoun is sensitive to the dependency length, being consistent with the hypothesis that quantificational elements in head-final languages, but not referential elements, show the length effects.

**Definiteness as Agreement: Comparative Evidence from Argument Ellipsis in Asia**

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Recent works on Argument Ellipsis (Oku 1998; Kim 1999; Şener and Takahashi 2010; Takahashi 2007, 2010, 2013) have shown that Japanese allows AE in subject and object positions whereas Chinese allows it only in object position. Takahashi argues this difference derives from subject agreement in Chinese and the lack thereof in Japanese. Rejecting this analysis of AE, I propose instead that the difference between Japanese and Chinese has its root in the well-known discourse restriction on subjects. Our analysis suggests that definiteness plays the same computational role as ϕ-agreement (Taraldsen 1978; Chomsky 1981) of uniquely identifying the missing subject as *pro*.

Japanese allows sloppy readings for empty subjects and objects alike whereas Chinese allows such a reading only for empty objects. This contrast is shown in (1-4). Adopting Saito's (2007) Anti-Agreement Hypothesis on AE, Takahashi (2010) claims that the subject-object asymmetry in Chinese follows if this language has person-agreement with the subject, as argued for by Miyagawa (2010). Miyagawa's empirical argument for this position comes from the observation that the long-distance 3rd person construal of *ziji* is blocked by an intervening 1st/2nd subject, as illustrated in (5-6). Note this blocking effect is absent in Japanese, as in (7-8). Assuming the movement analysis of anaphors in Chinese (Cole, Hermon and Sung 1990), Miyagawa argues the blocking effect in (6) arises because the 3rd person feature of the higher T for *ziji* clashes with the non-3rd person feature of the local T. The previous literature (Huang and Liu 2001; Li, in press) show, however, that the raising analysis does not sustain. First, (9) shows that *ziji* can take the matrix subject as its antecedent from within the Complex NP Island. Second, (10) shows that the blocking effect is triggered by a non-subject argument, a pattern mysterious under the LF-movement analysis of *ziji*. These observations thus undermine Miyagawa's argument for ϕ-agreement in Chinese, and hence Takahashi's analysis of said asymmetry in Chinese which crucially relies on Miyagawa's argument.

I propose that this asymmetry follows instead from the definite subject restriction, illustrated in (11). Japanese does not exhibit this restriction (12). More specifically, just like ϕ-agreement licenses a *pro* in a finite subject position in rich agreement languages such as Italian, as shown in (13), definiteness imposed by the Topic feature licenses the occurrence of a *pro* in the same position in topic-prominent languages such as Chinese, as shown in (14). Under the LF-Copy Theory of AE (Oku 1998), subject ellipsis involves LF-Copy of an overt subject onto the empty subject position in a subsequent elliptical structure. Since a topic, by definition, is a definite NP and cannot introduce a new discourse referent, the referential index of the subject must be recoverable by the time this DP undergoes LF-Copy. Accordingly, the empty subject in the subsequent clause must refer back to whatever the DP refers to in the antecedent clause. This derivation, thus, correctly excludes the sloppy reading for empty subjects in Chinese. Japanese allows AE in both subject and object positions, on the other hand, because subjects are not subject to the definiteness restriction.

(1) a. John-wa jibun-no sensei-o sonkeisiteiru.
John-TOP self-GEN teacher-ACC respect
'John respects his teacher.'

b. Bill-mo ***e*** sonkeisiteiru.(OK sloppy)
Bill-also respect
'Lit. Bill also respects ***e***.'

(2) a. John-wa jibun-no kodomo-ga Todai-ni ukaru-to
John-TOP self-GEN child-NOM Univ.of.Tokyo-DAT get.accepted-COMP
omotteiru
think
'John thinks that his child will go to University of Tokyo.'

b. Bill-wa ***e*** Kyoda-ni ukaru-to omotteiru. ($^{OK}$ sloppy)
Bill-TOP Kyoto.Univ.-DAT get.accepted-DAT think
'Lit. Bill thinks that ***e*** will get accepted to Kyoto University.'

(3) a. Zhangsan kanjian-le ta-de mama.
Zhangsan see-PERF he-DE mother
'Zhangsan saw his mother.'

b. Lisi ye kanjian-le ***e***. ($^{OK}$ sloppy)
Lisi also see-PERF
'Lit. Lisi also saw ***e***.'

(4) a. Zhangsan shuo ziji de haizixihuan Xiaohong.
Zhangsan say self DE childlike Xiaohong.
'Zhangsan said his child liked Xiaohong.'

b. Lisi shuo ***e*** xihuan Xiaoli. ($^{*}$sloppy)
Lisi say like Xiaoli.
'Lit. Lisi said ***e*** liked Xiaoli.'

(5) Zhangsan$_i$ zhidao [Lisi$_j$ dui ziji$_{i/j}$ mei xinxin.]
Zhangsan know Lisi to self NEG confidence
'Lit. Zhangsan$_i$ knows Lisi$_j$ has no confidence in self$_{i/j}$.' (Miyagawa 2010: 49)

(6) Zhangsan$_i$ juede [**{wo$_j$/ni$_j$}** dui ziji$_{*i/j}$ mei xinxin].
Zhangsan think I/you to self NEG confidence
'Lit. Zhangsan$_i$ feels that {I$_j$/you$_j$} have no confidence in self$_{*i/j}$.' (Miyagawa 2010: 50)

(7) Taroo$_i$-wa [**Hanako$_j$-ga** zibun$_{i/j}$-no syasin-o totta-to]
Taro-TOP Hanako-NOM self-GEN picture-ACC took-COMP
omotteiru.
think
'Lit. Taro$_i$ thinks that Hanako$_j$ took self's$_{i/j}$ picture.' (cf. Miyagawa 2010: 50)

(8) Taroo$_i$-wa [**{watasi$_j$/anata$_j$}-ga** zibun$_{i/j}$-no syasin-o totta-to]
Taro-TOP I/you-NOM self-GEN picture-ACC took-COMP
omotteiru.
think
'Lit. Taro$_i$ thinks that {I$_j$/you$_j$} took self's$_{i/j}$ picture.' (cf. Miyagawa 2010: 50)

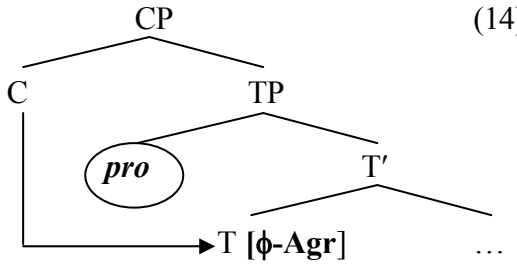
(9) Zhangsan$_i$bu xihuan [$_{NP}$ neixie [$_{CP}$ piping ziji$_i$ de ren]].
Zhangsan NEG like those criticize self DE person
'Zhangsan$_i$ does not like those people who criticize self$_i$.' (Li, in press)

(10) Zhangsan$_i$ gaosu wo$_j$ Lisi$_k$ hen ziji$_{*i/k}$.
Zhangsan tell me Lisi hate self
'Zhangsan$_i$ told me$_j$ that Lisi$_k$ hates self$_{*i/*j/k}$.' (Li, in press)

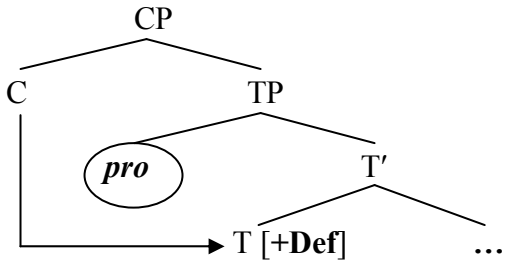
(11) {***Yi-ge/*yixie/*jige**} ren zai yuenzi li zuozhe.
one-CL/some/several-CL person at yard LOC sit
'{A man/some men/several men} is/are sitting in the yard.'

(12) **{Hitori-no/nanninka-no/suumei-no}** gakusei-ga toshokan-de
one-GEN/some-GEN/several-GEN student-NOM library-LOC
benkyoosite-iru.
studying-PROG
'{A student/some students/several students} is/are studying in the library.'

(13)




(14)




**References** [1] Li, A. Y.-H. In press. Born empty. *Lingua***.** [2] Miyagawa, S. 2010. *Why agree? Why move?* Cambridge, MA: MIT Press. [3] Oku, S. 1998. *A theory of selection and reconstruction in the minimalist perspective*. PhD Diss. Uconn. [4] Takahashi, D. 2010. Argument ellipsis, anti-agreement, and scrambling. Ms., Tohoku University.

**Cycle-sensitive Suppletion in Japanese**

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## 0. Introduction

*Deki*, a potential suppletive form of *s(uru)* (do) is one of the few suppletion in Japanese. Instead of *s-are*, an analytic combination of *s(uru)* and a default potential morpheme, *deki* appears in (1b).

(1) a. John-ga heya-o sooji si-ta
John-NOM room-ACC clean do-PAST
'John cleaned a room.'
b. John-ga heya-o sooji deki-ta/*s-are-ta
John-NOM room-ACC clean do.POT(ential)-PAST/do-POT-PAST
'John could clean a room.'

In this paper, I demonstrate that the recent theory of Distributed Morphology on cyclicity and locality for allomorphy (Embick 2010, Bobaljik and Wurmbrand 2013) explains distributions of *deki* (and *s(uru)*) with a set of morphological rules in (2). In Distributed Morphology, the most specific rule (2a) is applied preferentially and the least specific rule (2b) determines elsewhere form.

(2) ordered morphological rules for Vocabulary Insertion (VI) of [+V]
a. [+V] ↔ *deki* / __⌒[+POT] (⌒: concatenation operator via linearization (Embick 2010))
b. [+V] ↔ *s* <elsewhere>

The suppletive form *deki* appears only when VIs for [+V] and [+POT] are at the same cycle: A) the exponent of [+V] is not fixed at the early cycle and B) no other cycle heads intervene between [+V] and [+POT].

## 1. Distributions

### 1.1. *S(uru)* as elsewhere form of [+V]

The ordered rules (2) where *s(uru)* is an elsewhere form of [+V] on a verbalizer head correctly covers distributions of *s(uru)* in various environments: as main predicate in (3a), with Verbal Noun (VN) in (3b), and with small clause (SC) in (3c).

(3) a. John-ga tenisu-o si-ta
John-NOM tennis-ACC do-PAST
'John played tennis.'
b. John-ga heya-o sooji si-ta
John-NOM room-ACC clean.VN do-PAST
'John cleaned a room.'
c. John-ga [$_{SC}$ heya-o kuraku] si-ta
John-NOM room-ACC dark do-PAST
'John made a room dark.'

Their structures are as follows (irrelevant ones are omitted).

(4) a. [√Ø v[+V]] (√: *Root*, category neutral syntactic object)
b. [[nP √sooji n[+N]] v[+V]]
c. [[$_{SC}$ [$_{NP}$ heya] [$_{AP}$ kuraku]] v[+V]]]

Because a *Root* does not have its own phonetic content, a category-defining head v[+V] is realized as *s(uru)* in (4a). On the other hand, *s(uru)* is inserted to v[+V] since they are independent syntactically from their complements: the nP constructs VN in (4b) and SC in (4c). The important point here is that the analysis does not claim that every *s(uru)* has the same grammatical property (cf. Kageyama 1992). *S(uru)* covers diverse syntactic environments because it is an elsewhere form of v[+V].

**1.2. *Deki* as suppletive form for two types of *s(uru)***

There is an interesting asymmetry between (3a) and (3b, c) regarding whether *deki* appears as a potential suppletive form. (3b) and (3c) allow *deki* while (3a) does not.

(5) a. *John-ga tenisu-o deki-ta
John-NOM tennis-ACC do-PAST
'John could play tennis.'
b. John-ga heya-o sooji deki-ta
John-NOM room-ACC clean.VN do.POT-PAST
'John could clean a room.'
c. John-ga [$_{SC}$ heya-o kuraku] deki-ta
John-NOM room-ACC dark do.POT-PAST
'John could make a room dark.'

When the case of the object is nominative, (5a) becomes grammatical. However, it is not a suppletive counterpart to (3a) but another construction.

**2. Analysis: Cycle-sensitive VI**

I take the cycle-sensitive VI approach for contextual allomorphy in Distributed Morphology (Embick 2010, Bobaljik and Wurmbrand 2013). The following structures are derived with PotP.

(6) a. [[√Ø v[+V]] Pot[+POT]]
b. [[nP √sooji n[+N]] v[+V]] Pot[+POT]]]
c. [[$_{SC}$ [$_{NP}$ heya] [$_{AP}$ kuraku]] v[+V]]] Pot[+POT]]]

In (6a) VI to v[+V] occurs at the same cycle (boxed part) with a *Root* since it must refer to the information of *Root*'s phonetic content. On the other hand, as v[+V] is independent from the lower cycle: nP in (6b) and SC in (6c), v[+V] and Pot[+POT] can undergo linearization and VI at the same cycle (underlined parts). Therefore, the context "[+V]⌒[+POT]" which is sufficient for an insertion of *deki* is not constructed in (6a) but (6b,c).

**3. More on [+POT]**

I introduce the following ordered morphological rules for overall VIs of [+POT].

(7) a. [+POT] ↔ Ø / [+V]⌒__
b. [+POT] ↔ (*rar)e* <elsewhere>

(7a) prevents an incorrect sequence **deki*[+V]-*rare*[+POT]. The important point here is that the context in (7a) is available when [+V] and [+POT] are at the same cycle as described above. Moreover, they explain the following case.

(8) a. heya-o sooji s-ase-rare-ru
room-ACC clean.VN do-CAUS(e)-POT-PRES
'can make someone clean a room'
b. [[[nP √sooji n[+N]] v[+V]] Voice[+CAUS]] Pot[+POT]]]

Intervening of another cycle head Voice[+CAUSE] blocks an insertion of *deki* and an independent head Pot[+POT] is realized as *rare*, the elsewhere form, by the rule (7b).

**4. Implication**

The present analysis shows that suppletion and allomorphy are strictly local (Embick 2010). Another important theoretical consequence of the study is that analyzing suppletion needs information about not only in which cycle each item is located but also in which cycle each item undergoes linearization or VI (cf. *Domain Suspension* in Bobaljik and Wurmbrand 2013). This must be a valuable case study of an agglutinative language for rapidly-developing explorations for the theory of locality and allomorphy.

**References**

Bobaljik, Jonathan and Susi Wurmbrand (2013) Suspension across domains. In Ora Matushansky and Alec Marantz, eds. *Distributed Morphology Today: Morphemes for Morris Halle*. 185-197. The MIT Press.

Embick, David (2010) *Localism versus Globalism in Morphology and Phonology*. The MIT Press.

Kageyama, Taroo (1992) Dummy *su-* and lexical *su-*: A reply to Miyama. *Gengo Kenkyu* 102: 165-174.

**Focus Particle Phrases in Japanese: Against the Modifier Hypothesis**

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**1. Synopsis** The concern of this paper is the class of focus particle in Japanese, such as *mo* 'also', *wa* 'at least', *dake* 'only', and *sika* 'only$_{[+\text{NPI}]}$'. Specifically, focusing on the additive *mo*, we address whether the phrase that consists of a focus particle and a DP (henceforth, FPP) serves as an argument or adjunct for the predicate. For instance, what analysis is possible for the fact that FPPs can optionally co-occur with Case-marked DPs, as shown in (1)?

(1) (Gakusei-**ga**) *John-mo* hasit-ta.
student-Nom John-also run-Past
Without the nominative DP: 'John ran, too.'
With the nominative DP: 'The students ran, including John.'

Kobuchi-Philip (2010) semantically implements the "modifier" hypothesis that FPPs are VP-adjuncts and always co-occur with true argument DPs or their null-pronoun counterpart *pro*. However, we argue that FPPs occupy argument positions and optionally introduce Case-marked DPs as their arguments, and propose that the semantics of FPPs blocks their association with definite DPs, including *pro*.

**2. Data** There are three pieces of evidence against the modifier hypothesis. First, FPPs cannot be associated with overt pronouns such as *karera* 'they', as shown in (2). This leads us to doubt that FPPs can be associated with the null counterpart of pronouns, namely, *pro*.

(2) *Karera-ga *John-mo* hasit-ta.
they-Nom John-also run-Past
'They ran, including John.'

Second, FPPs cannot be associated with *ni*-dative DPs, as shown in (3). This fact cannot be explained if FPPs are VP-adjuncts that are free to semantically interact with argument DPs, including datives.

(3) a. Mary-ga gakusei-**o** *John-mo* sikat-ta.
Mary-Nom student-Acc John-also scold-Past
'Mary scolded the students, including John.'
b. * Mary-ga gakusei-**ni** *John-mo* at-ta.
Mary-Nom student-Dat John-also meet-Past
'Mary met the students, including John.'

Third, FPPs must occur in Case-positions. To make the point, let us consider the *(s)ase*-causative con- struction. As shown in (4a-b), this construction is ungrammatical if the causee DP and the embedded object DP are both marked accusative (i.e., the Double-*o* Constraint). Let us take this fact to mean that the embedded object DP cannot be assigned accusative Case if the causee DP is marked accusative. We now point out that FPPs cannot occur in such Case-less positions, as shown in (4c). Thus, it is not clear what restricts FPPs to

Case-positions, if they are VP-adjuncts, which in general require no Case- licensing, as in the case of adjunct PPs (e.g., *John-to* 'with John').

(4) a. Mary-ga John-**o** [sono-ie-**ni** ik]-ase-ta.
Mary-Nom John-Acc that-house-Dat go-Caus-Past
'Mary had John go to the house.'

b. * Mary-ga John-**o** [sono-ie-**o** sirabe]-sase-ta.
Mary-Nom John-Acc that-house-Acc investigate-Caus-Past
'Mary had John look into the house.'

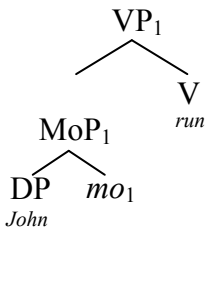
c. * Mary-ga John-**o** [*sono-ie-mo* sirabe]-sase-ta.
Mary-Nom John-Acc that-house-also investigate-Caus-Past
'Mary had John look into the house, too.'

**3. Analysis** Let us offer a new analysis of the syntax and semantics of the phrase headed by *mo* (henceforth, MoP). For the syntax, we assume that **(i)** DPs have Case-features that designated heads (e.g., T) must check via the operation *Agree*, and such heads in Japanese can check all Case-features in their sister domains (Hiraiwa 2001). For the semantics, we assume that **(ii)** definite DPs can be of type <e, t> and denote singleton sets (e.g., [[*John*]] = {j}) (Partee 1986); **(iii)** plural DPs denote sets of plural entities and thus definite plural DPs can denote singleton sets with plural entities (e.g., [[*John and Mary*]] = { j⊕m }) (cf. Link 1983). Now we propose that there are two types of *mo*, as shown in (5), and that each type derives different syntactic and semantic structures at the level of VP, as shown in (6):

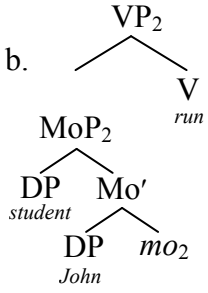
(5) a. $[[mo_1]] = \lambda P_{<e,\,t>} \lambda Q_{<e,\,t>}\, [P \subseteq Q \,\&\, |Q - P| \neq 0]$

b. $[[mo_2]] = \lambda P_{<e,\,t>} \lambda Q_{<e,\,t>} \lambda R_{<e,\,t>}\, [P \subseteq Q \,\&\, |Q - P| \neq 0 \,\&\, Q \subseteq R \,\&\, |R - Q| \neq 0]$

(6) a.




b.




[[VP1]] in (a) =
[{j} ⊆ RUN & |RUN − {j}| ≠ 0]

[[VP2]] in (b) =
[{j} ⊆ STU & |STU − {j}| ≠ 0
& STU ⊆ RUN & |RUN − STU| ≠ 0]

Considering (6b), the $MoP_2$ contains two DPs, and the $VP_2$ asserts that John is a student; the set of students (STU) minus {John} is not zero in cardinality; STU is a subset of the set of runners (RUN); and RUN minus STU is not zero in cardinality. From these proposals, the facts in (1) to (4) follow. First, FPPs can optionally co-occur with Case-marked DPs, as there are two types of *mo*; $mo_2$ adds another DP while $mo_1$ does not. Note that in (6b) both of the two DPs can be Case-licensed by T under the assumption **(i)**. Second, FPPs cannot be associated with the pronoun *karera*, because it cannot satisfy a semantic requirement by $mo_2$, given that the set that *karera* can denote is a singleton set with one plural entity; specifically, $mo_2$ requires that [[*John*]] ⊆ [[*karera*]] be defined, but it is impossible in that [[*John*]] is the set of one atom while [[*karera*]] is the set of one plural entity. Third, FPPs cannot be associated with *ni*-dative DPs, because inherent Cases such as *ni* are assigned by particular verbs (e.g., *aw* 'meet') to their arguments; in other words, the ungrammaticality of (3b) is reduced to the claim that the DP *gakusei* is not an argument of the dative verb, and cannot be Case-licensed by it. Fourth, FPPs must occur in Case-positions, because they occupy argument positions and contain DPs that must be Case-licensed. Finally, note the further prediction of (6b) that MoP

cannot precede Case-marked DP. This is correct, as shown in (7a); (7a) is ruled out by the Proper Binding Condition, as in (7b):

(7) a. * *John-mo*$_i$ gakusei-**ga**$_j$ $t_i$ hasit-ta. b. [$_{MoP}$ $t_j$ [$_{Mo'}$ DP *mo*]]$_i$ …DP-**ga**$_j$ … $t_i$ …

**4. Conclusion** As implied by using the term 'FPPs', the properties of *mo* 'also' shown in (1) to (4) all hold for other FPPs (e.g., *wa* 'at least', *dake* 'only', *sika* 'only$_{[+ NPI]}$'). Thus, FPPs in general cannot be defined as VP-adjuncts, suggesting that the modifier hypothesis is not tenable. However, note an inter- esting syntactic asymmetry among FPPs: *mo* and *wa* are restricted by the Proper Binding Condition, as in (7), while *dake* and *sika* are not. Hence, there remain two issues. First, what structures do *dake* and *sika* project? Second, why does this asymmetry arise? This is indeed a loose end, but we believe that our proposals for *mo* will stimulate further discussions for the Japanese syntax/semantics and beyond.

**References** **Hiraiwa, K. (2001)** Multiple agree and the defective intervention constraint in Japa- nese," *MITWPL* 40, 67-80. **Kobuchi-Philip, M. (2010)** Japanese *mo* 'also/even' and *shika* 'except for/only', *Proceedings of Sinn und Bedeutung* 14, 219-236. **Link, G. (1983)** The logical analysis of plurals and mass terms: A lattice-theoretical approach, *Meaning, Use and Interpretation of Language*, 302-323. **Partee, B. (1986)** Noun phrase interpretation and type-shifting principles, *Studies in Dis- course Representation Theory and the Theory of Generalized Quantifiers*, 115-143.

**Prosody and the Comparative Syntax of Wh-question Formation in Tokyo Japanese and Kumamoto Yatsushiro Japanese**

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A number of recent works (Deguchi and Kitagawa 2002, Ishihara 2002, Kitagawa 2005, among many others) have shown that not only syntax, but also prosody plays a pivotal role in accounting for the nature of Wh-questions in Tokyo Japanese (TJ) which *must* exhibit (A) **Focus Prosody** (FP); FP-less/incorrect-FP Wh-questions are ungrammatical.

(A) FP of Wh-question ($FP_{Wh}$):
(i) ***Wh*-phrases must be accompanied by *$F^0$-boosting***, (ii) followed by $F^0$-compression between ***Wh*-phrases** and *the $Q_{Wh}$-particle* (which license the Wh-phrase). (ref.[1])

(1) Wh-question and $FP_{Wh}$ in TJ:
[$_{CP}$ Mari-ga ***nani***-$o_{(i)}$ nomiya-de ($t_i$) non-da *no*]? (A-i) ***$F^0$-boosting*** on ***nani***-
M.-NOM Wh-ACC bar-at drink-TNS $Q_{Wh}$ (A-ii) $F^0$-compression until *no*
'[$Q_{Wh}$ [What$_i$ did Mari drink $t_i$ at the bar]]?' N.B. NO ***$F^0$-boosting*** on ***V***(-T)

Richards (2010) argues that the otherwise grammatical Wh-questions with an embedded "C-headed/Q-less Wh-CP" (CP that contains Wh-phrase but not Q-particle) in TJ (2)a becomes ungrammatical when an embedded CP is right dislocated since the necessary $FP_{Wh}$ cannot be formed (2)b, unlike the right dislocated "Q-headed Wh-CP" (CP that contains both Wh-phrase and Q-particle) which is grammatical since it maintains the required $FP_{Wh}$ even after right dislocation (3). Likewise, Yamashita (2010) argues that the reason Wh-phrases cannot be right dislocated in TJ (Haraguchi 1973, Kuno 1978) is due to prosodic reasons; the necessary $FP_{Wh}$ cannot be formed (4).

(2) in-situ and right dislocation (RD) of "C-headed/Q-less Wh-CP" in TJ: (Richards 2010)
a. in-situ "C-headed/Q-less Wh-CP" (A-ii)Correct $F^0$-compression until *no*
Ken-ga [$_{CP}$ Mari-ga ***nani***-o nomiya-de non-da to] (Yumi-ni) tsutae-ta *no*?
K.-NOM M.-NOM Wh-ACC bar-at drink-TNS C Y.-DAT tell-TNS $Q_{Wh}$
'[What$_i$ $Q_{Wh}$ did Ken tell (Yumi) [that Mari drank $t_i$ at the bar]]?'
b. RD of "C-headed/Q-less Wh-CP": *(A-ii)NO $F^0$-compression until *no*
*Ken-gat $t_{CP}$ (Yumi-ni) tsutae-ta *no*?, [$_{CP}$ Mari-ga ***nani***-o nomiya-de non-da to]?
K.-NOM Y.-DAT tell-TNS $Q_{Wh}$ M.-NOM Wh-ACC bar-at drink-TNS C
'[[What$_i$ $Q_{Wh}$ did Ken tell (Yumi) $t_{CP}$]?, [$_{CP}$ that Mari drank $t_i$ at the bar]$_{(RD)}$]?'

(3) RD of "Q-headed Wh-CP" in TJ: (Richards 2010)

a. in-situ "Q-headed Wh-CP"
Ken-ga [$_{CP}$ Mari-ga ***nani***-o nomiya-de non-da ka] (Yumi-ni) tsutae-ta
K.-NOM M.-NOM Wh-ACC bar-at drink-TNS $Q_{Wh}$ Y.-DAT tell-TNS
{*no*?/yo.}
$Q_{y/n}$/SFP
'[{$Q_{y/n}$ Did K. tell/K. told} (Yumi) [$_{CP}$ what$_i$ $Q_{Wh}$ Mari drank $t_i$ at the bar]]{?/.}'

b. RD of "Q-headed Wh-CP"
Ken-ga $t_{CP}$ (Yumi-ni) tsutae-ta {*no*?/yo}, [$_{CP}$ Mari-ga ***nani***-o nomiya-de
K.-NOM Y.-DAT tell-TNS $Q_{y/n}$/SFP M.-NOM Wh-ACC bar-at
non-da *ka*]?
drink-TNS $Q_{Wh}$
'[[{$Q_{y/n}$ Did K. tell/K. told} (Yumi) $t_{CP}$]{?,/,} [$_{CP}$ what$_i$ $Q_{Wh}$ Mari drank $t_i$ at the bar] $_{(RD)}$]?'

(4) RD of Wh-phrase out of Wh-question in TJ: (Yamashita 2010; Haraguchi 1973, Kuno 1978)

*[$_{CP}$ Mari-ga $t_i$ nomiya-de ***non-da*** *no*]?, ***nani***-o$_i$? (A-i) ***$F^0$-boosting*** on ***nani***-
M.-NOM bar-at drink-TNS $Q_{Wh}$ Wh-ACC *(A-ii) NO $F^0$-compression until *no*
'[[$Q_{Wh}$ [Mari drank $t_i$ at the bar]]?, what$_{i(RD)}$]?' *(B) unnecessary ***$F^0$-boosting*** on ***V***(-T)

The aim of this paper is to present and provide further arguments for the general line of research that takes syntax-prosody interface of Wh-questions into consideration seriously (see the references cited above), by providing hitherto unnoticed and novel evidence involving right dislocation and Wh-questions in Kumamoto Yatsushiro Japanese (KYJ), which shows some striking and interesting differences from that of TJ.

The prosody and syntax of Wh-questions in KYJ shows completely differently patterns from that of TJ. <1>***Wh-questions in KYJ lacks $FP_{Wh}$; i.e., there is no $F^0$-boosting on Wh-phrases***. <2>***Both right dislocation of "C-headed/Q-less Wh-CP" and Wh-phrase are grammatical in KYJ*** (5)&(6).

(5) in-situ and RD of "C-headed/Q-less Wh-CP" in KYJ:

a. in-situ "C-headed/Q-less Wh-CP"
Ken-no [$_{CP}$ kuroka inu-n **nan**-ba soko-de non-da te] (Yumi-ni) tsutae-ta
K.-NOM black dog-NOM Wh-ACC there-at drink-TNS C Y.-DAT tell-TNS
*kkai*?
$Q_{Wh}$
'[What$_i$ $Q_{Wh}$ did Ken tell (Yumi) [that black dog drank $t_i$ there]]?'

b. RD of "C-headed/Q-less Wh-CP"
$^{OK}$Ken-no $t_{CP}$ (Yumi-ni) tsutae-ta *kkai*?, [$_{CP}$ kuroka inu-n **nan**-ba soko-de
K.-NOM Y.-DAT tell-TNS $Q_{Wh}$ black dog-NOM Wh-ACC there-at
non-da te]?
drink-TNS C
'[[What$_i$ $Q_{Wh}$ did Ken tell (Yumi) $t_{CP}$]?, [that black dog drank $t_i$ there] $_{(RD)}$]?'

(6) RD of Wh-phrase out of Wh-question in KYJ:

$^{OK}$[$_{CP}$ Kuroka inu-n $t_i$ soko-de non-da *kkai*]?, **nan**-ba$_i$?
black dog-NOM there-at drink-TNS $Q_{Wh}$ Wh-ACC
'[[$Q_{Wh}$ black dog drank $t_i$ there]?, what$_{i(RD)}$]?'

Note here that the existing "syntax/semantic"-only analyses cannot give proper accounts for this difference, since there are no known dialectal differences in terms of syntax and/or semantics. I argue that the differences between the two dialects in the (un)availability of right dislocation of "C-headed/Q-less Wh-CPs" and Wh-phrases naturally follows from the Syntax-Prosody analysis; unlike Wh-questions in TJ (with $FP_{Wh}$), ***Wh-questions in KYJ, being without $FP_{Wh}$, does not lead to incorrect-$FP_{Wh}$ even if right dislocation takes place***.

Crucially, the analysis utilizing the presence and absence of prosodic conditions on Wh-questions in TJ and KYJ also accounts for ***the differences between the two dialects in the (un)availability of Wh-island effect***, which is schematically illustrated in (7).

(7) Wh-island configuration:
$^{OK}$[$_{CP}$ … [$_{CP}$(…) **Wh**-phrase (…) V-T Q] V-T *Q*]? (Wh-island effect is **absent** in TJ)
*[$_{CP}$ … [$_{CP}$ (…) **Wh**-phrase (…) V-T Q] V-T *Q*]? (Wh-island effect is **present** in KYJ)

As is well-known, Deguchi and Kitagawa 2002 and Ishihara 2002 have shown that, in TJ, Wh-island effect can be voided. What is novel is that, ***in KYJ, in contrast, Wh-island effect is present***. Note that the gist of voiding the Wh-island effect in TJ is to assure the appropriate $FP_{Wh}$ expressing the dependency relation between the matrix $Q_{Wh}$ and the Wh-phrase within the Wh-island, *otherwise Wh-island holds*. Since KYJ lacks $FP_{Wh}$ to begin with, the strategy available for TJ cannot be implemented. Hence, the Wh-island holds (in fact, robustly) in KYJ. Thus, **the lack of $FP_{Wh}$ is related to the presence of Wh-island effect**.

The important implication of this paper is that there are cases where we must make use of prosodic factors in analyzing syntactic problems, calling for the need and importance of syntax-prosody interface approach (as noted e.g., in Kitagawa 2005: p.303).

**References:** **[1]** (a) **Deguchi, M. and Y. Kitagawa. 2002.** *NELS* 32, 73-92. (b) **Ishihara, S. 2002.** *WCCFL* 21, 180-193. (c) **Kitagawa, Y. 2005.** *English Linguistics* 22:2, 302-346. **[2]** (a) **Haraguchi, S. 1973.** Remarks on Dislocation in Japanese. Ms., MIT. (b) **Kuno, S. 1978.** *Danwa-no Bumpo [Grammar of Discourse]*. Taishukan. **[3]** (a) **Richards, N. 2010.** *Uttering Trees*. MIT Press. (b) **Yamashita, H. 2010.** *WCCFL* 28 *Online Proceedings*.

**Merge, movement and music**

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In an influential paper Katz & Pesetsky (2011) present *the identity thesis for language and music*, stating that ‚[a]ll formal differences between language and music are a consequence of differences in their fundamental building blocks (arbitrary pairings of sound and meaning in the case of language; pitch-classes and pitch-class combinations in the case of music). In all other respects, language and music are identical.' Katz & Pesetsky argue that just like syntactic structures, musical structures are generated by (binary) Merge, for which they provide a number of arguments. For instance, musical structures are endocentric (each instance of Merge in music, just like in language, has a labelling head); particular musical structures can map into other musical structures (according to Lerdahl & Jackendoff 1983, time-span reductions map into prolongational reductions), just like syntactic structure maps into prosodic structure (cf. Selkirk 1984); and, finally, they take movement phenomena (i.e. the application of Internal Merge) to be present in both language and music.

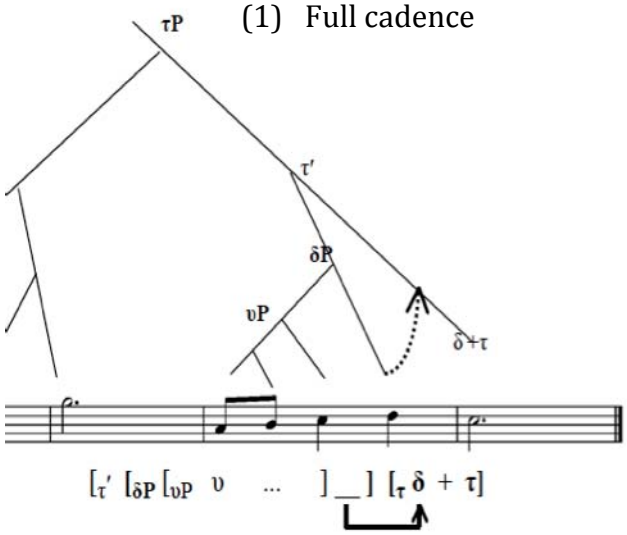
While fully endorsing the view that musical structures are the result of multiple application of External (binary) Merge, this paper argues that the arguments in favour of the presence of Internal Merge in music are at best inconclusive and arguably incorrect. This is, however, not taken as an argument against the identity thesis for language and music; rather we take it to speak in its favour: the identity thesis for language and music reduces all differences between language and music to its basic building blocks. If Internal Merge in language is driven by particular features (*in casu* uninterpretable features, cf. Chomsky 1995, 2002, Boskovic 2007) that are language-specific and not applicable to music, the direct consequence is that Internal Merge cannot apply in music either.

The evidence Katz & Pesetsky provide in favour of movement in musical structure comes from the phenomenon full cadence (listen here for an example). In full cadences, the final chord, the tonic (τ), which determines the key and counts as the head of the entire musical structure, must be preceded by a dominant (δ), a chord whose root is five scale-steps away from the tonic, and which has at least one dependent, headed by the so-called subdominant (ν), generally, but not always four scale-steps away from τ. Whereas in terms of time-span reduction ν is a dependent of the head δ, in the prolongational reduction δ acts as a dependent of τ. δ and τ are felt to yield some unit. See (1) for a relevant excerpt, taken from Katz & Pesetsky. Since the structure requires some full δP as the complement of τ and at the same time δ and τ form a single unit, where δ acts as the dependent of τ, Katz & Pesetsky argue that δ undergoes head-movement to τ.

These facts, however, do not necessarily diagnose head movement. To see this, let's think of δ as the musical counterpart of some affix that heads a projection of its own (δP) and at the same time must adjoin to some higher head (τ) in compliance with the Stray Affix filter (Lasnik 1981, 1995, Baker 1988). In head-initial configurations this naturally triggers head movement, as shown in (2a):

(2) a. $[_{\tau P}\ \delta_i\text{-}\ \tau\ [_{\delta P}\ t_i]]$
b. $[_{\tau P}\ [_{\delta P}\ \delta\text{-}]\ \tau]$

(1) Full cadence



But in head-final configurations (2b), as Bobaljik (1995) has pointed out, head movement is not necessary at all, since the requirement that δ and τ are string adjacent, an necessary condition for the Stray Affix filter, is already fulfilled, thus rendering δ-to-τ movement superfluous. Since full cadences necessarily involve head-final tonics, all instances of full cadences can thus be explained in this way without alluding to head movement: the only requirement that the δ and τ heads must be string-adjacent is guaranteed by the structure.

However, the fact that full cadences are not necessarily indicative of head movement does not entail that they do not involve head movement. The facts presented by Katz & Pesetsky are still fully compatible with a head movement analysis. However, there are four arguments that suggest that an analysis of full cadence in music that does not treat it in terms of head movement fares much better. First, full cadences are the only instances attested in music that might reflect movement. No other structural musical phenomenon reflecting movement has been observed thus far, suggesting that at best movement is extremely limited if not absent in music at all. If movement is altogether absence (and full cadence is some adjacency requirement), this asymmetry is fully explained; if it is not, the asymmetry between language and music remains mysterious. Second, the kind of head movement that Katz & Pesetsky propose is the musical variant of rightward and string-adjacent movement. These are exactly the two types of movement that receive general scepticism in linguistic theory (see Kayne 1995, Ackema & Neeleman 2002 for arguments against rightward movement and see Bobaljik 1995 and many others working in the Distributed Morphology framework for arguments against string-adjacent movement. Third, to the extent that head movement ultimately solves a violation of the Stray-Affix filter it does so to prevent a look-ahead problem (the adjacency violation can only take place in PF, but syntax precedes PF, so some additional trigger needs to be invoked to ensure that the affix is at the proper position at PF). Since in music δ is already in the proper position (adjacent to τ) there is no need to assume such an additional triggering feature in the first place. Fourth, if Internal Merge never takes place in music, this fact can very naturally be explained as a difference between musical and linguistic building blocks. The major difference between linguistic building blocks and musical building blocks is that linguistic building blocks are triplets of formal, semantic and phonological features, whereas musical building blocks are chords, consisting of multiple pitch-class elements. Clearly, the latter do not combine features that belong to different modalities (as linguistic building blocks do). Chords are mono-modular in this sense. A general property of uninterpretable features is that they are interface features (after the definition of Svenonius 2007). In order for some linguistic feature to be uninterpretable, it must be visible to two modules, but only give rise to well-formedness effects on of them. Phi-features, for instance, are interface features that are always formally/syntactically active, and at the same time semantically interpretable on only some elements (DPs). On other elements (e.g. finite verbs) they are uninterpretable and give rise to movement effects to check them off. If uninterpretable features must be interface features, the consequence is that cognitive building blocks, such as musical chords, that are mono-modular can never be said to carry uninterpretable features (by definition). Consequently, if Internal Merge is indeed driven by the checking requirements of uninterpretable features, Internal Merge in music must be categorically ruled out.

On the basis of these arguments, we conclude that movement is altogether absent in musical structure, and that this follows from *identity thesis for language and music*, given that all features of musical building blocks are mono-modular as opposed to the features that constitute the building blocks of natural language grammars.

**Selected references**: **J. Bobaljik (1995)**. Morphosyntax: The Syntax of Verbal Inflection. PhD. dissertation, MIT. **J. Katz & D. Pesetsky (2011)**. The Identity Thesis for Language and Music. LingBuzz 000959. **F. Lerdahl & R. Jackendoff (1983)**. A generative theory of tonal

music. Cambridge, MA: MIT Press. **P. Svenonius (2007)**. Interpreting uninterpretable features. Linguistic Analysis 33: 375-413.

**Root allomorphy in Ranmo (Papuan)**

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**Introduction.** Ranmo, a previously unstudied Papuan language spoken by <300 in Western Province, Papua New Guinea, exhibits the so-called 'constructed dual' phenomenon, whereby a small class of verbs express the dual value of the number category by apparently "crossing" a singular vs. non-singular distinction in the object prefix with a dual vs. non-dual distinction in the suppletive root in certain morphosyntactic contexts, as shown in (1c).

| | | | |
|---|---|---|---|
| (1) | a. Y-ia.<br>3SG.MSC.OBJ-go:N<br>'He goes.' | b. L-ia.<br>2/3NSG.OBJ-go:ND<br>'They/you(3+) go.' | c. **L-ra**.<br>2/3**NSG**.OBJ-go:<br>'They/you(2) go.' |

I argue that this unusual expression of duals can be accounted for by characterizing root suppletion as context-conditioned root Vocabulary Item competition (and not true Agreement). The proposed analysis thus highlights root suppletion as such and argues for a uniform treatment of roots and abstract morphemes, subjecting both to Late Insertion.

***v* is the (sole) locus of agreement.** We would be misled to take the interaction between the two number features at distinct terminal nodes in (1c), i.e., NSG and DL, as evidence that there are, correspondingly, two loci of syntactic agreement. I argue that there is only one locus of agreement, namely *v*, and syntactic agreement proceeds in the expected way in (1c): the verb checks and values its uninterpretable number (and person) feature against the sole DP argument, with the result that both the DP and the verb with which it has agreed are dual. Indeed, in verbs showing no suppletion (i.e., showing dual/plural syncretism), *v* is the only node at which agreement features are spelled out, as in (2). Either underspecification of Vocabulary Items or post-syntactic impoverishment of dual features (e.g., Nevins (2007)) could then capture the syncretism between plural (1b) and dual (1c).

| | | | | | | |
|---|---|---|---|---|---|---|
| (2) | a. | Yuwar | **y**-aran. | b. | Yuwar | **l**-aran. |
| | | cry | **3SG.MSC.OBJ**-ooze | | cry | **2/3NSG.OBJ**-ooze |

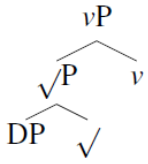
**Root Vocabulary Items compete for insertion under adjacency.** If the object prefix is the sole morphophonological output of verbal agreement, it cannot be the case that the number-conditioned root suppletion is also agreement. Following Harley (2013), I propose that suppletion in (1) can be accounted for by positing context-dependent competition between two root Vocabulary Items. After the syntactic derivation, the root node in the verb phrase is realized by the Vocabulary Item (3a) in the context of a dual argument and (3b) elsewhere.

(3) a. $\sqrt{}$GO ↔ /ra/ / [DP*dual*___]
b. $\sqrt{}$GO ↔ /ia/ elsewhere

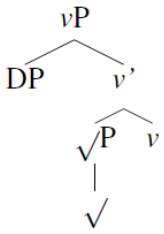
Crucially, competition between root Vocabulary Items is constrained by a locality condition, stated in (4) and schematized in (5).

(4) ***Locality condition on competition between Root Vocabulary Items***
A root must be adjacent to the DP conditioning its suppletion, i.e., the two elements must be sisters.

(5) Context for suppletion (unaccusative)




(6) Not a context for suppletion (unergative)




Two predictions follow from (4): (i) transitive verbs may show suppletion according to the number of objects (borne out) and (ii) root suppletion will be unattested in environments where the DP is not in a local relationship with the root, as in the unergative context in (6).

**Testing the second prediction**. Another kind of (apparent) root allomorphy is illustrated by Ranmo "middle" verbs, which do not show alternation according to the number of the DP, but according to the morphosyntactic features of the middle morpheme, realized by one of four (TAM-encoding) middle exponents, two of which are shown in (7).

(7) a. Ta-**mblaf**/*ta-mblafer.
M.PRFV-wake up
'He/she/I/you(sg) woke up.'

b. Nga-**mblafer**/*nga-mblaf.
M.IPFV-wake up
'He/she/I/you(sg) are waking up.'

Note that unlike object-marking (ergative-patterning) stative verbs in (1) and (2), middle verbs pattern with transitive subjects in showing a nominative-accusative alignment of agreement, whereby the sole argument is indexed by a subject suffix (zero when singular as in (7)). Thus, they are unergative, i.e., contain an external argument, which cannot condition root suppletion as per (4). Therefore, stem alternation in (7) does not present a case of root suppletion, i.e., it cannot be characterized as root Vocabulary Item competition subject to a locality restriction. The first clue to its true nature comes the observation that the two stems are phonologically related, as further illustrated by other verbs in (8); in fact, each pair share a common core and that is the root. This can be captured by positing a "root extension," a modifying element that attaches to a root to derive a complex root (cf. Marantz (2001), Acquaviva (2009) ). On this view, (8) is more accurately characterized as (9). Thus, in (7), it is the node containing the root extension, not the root, which shows (run-of-the-mill, outwards-sensitive) allomorphy, the choice of allomorph being determined by the morphosyntactic features of the middle morpheme.

(8)

| Root | $Stem_1$ | $Stem_2$ |
|---|---|---|
| $\sqrt{\text{WAKE UP}}$ | mblaf | mblafer |
| $\sqrt{\text{SIT DOWN}}$ | mints | mintser |
| $\sqrt{\text{RETURN}}$ | mbrim | mbring |
| $\sqrt{\text{SIT ON TOP}}$ | faklam | faklak |

$\Rightarrow$ (9)

| Root | $Extension_1$ | $Extension_2$ |
|---|---|---|
| $\sqrt{\text{MBLAF}}$ | -∅ | -er |
| $\sqrt{\text{MINTS}}$ | -∅ | -er |
| $\sqrt{\text{MBRI}}$ | -m | -ng |
| $\sqrt{\text{FAKAL}}$ | -m | -k |

**Implications.** The constructed dual phenomenon in Ranmo finds a straightforward account in Root Vocabulary Insertion constrained by locality, which must be distinguished from other types of contextual allomorphy. One positive consequence of the proposed analysis is that it obviates the need for any "radical" Readjustment Rules (phonological rewriting) to derive "radical" suppletion like *go*/*went* as opposed to, e.g., *sing*/*sang* (cf. Embick and Halle (2005)). The proposal straightforwardly captures the constructed dual phenomenon in Ranmo without invoking mechanisms such as multiple agree or notions like "meaning targets" as in Campbell (2012). Further implications include: (i) Late Insertion applies to roots as well as functional morphemes and (ii) roots in Ranmo must be individuated in the syntax prior to spell-out, in order to allow for competition between suppletive Vocabulary Items targeting root nodes.

## References


Acquaviva, P. (2009). Roots and lexicality in distributed morphology. In *Alexandra Galani, Daniel Redinger and Norman Yeo (eds.). YPL2-Issue 10 (May 2009) Special Issue-York-Essex Morphology Meeting (YEMM)*. University of York. Department of Language and Linguistic Science.

Campbell, A. M. (2012). *The Morphosyntax of Discontinuous Exponence*. Ph. D. thesis, University of California, Berkeley.

Embick, D. and M. Halle (2005). On the status of stems in morphological theory. *Amsterdam Studies in the Theory and History of Linguistic Science Series 4 270*(37).

Harley, H. (2013). On the identity of roots. *lingbuzz/001527*.

Marantz, A. (2001). Words. WCCFL XX Handout, USC.

Nevins, A. (2007). Dual number and context-sensitive markedness. *Ms. Harvard University [lingBuzz/000235]*.

**The Syntax and Phonology of Non-Compositional Compounds in Yixing Chinese**

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This paper is a discussion of the (tonal) phonology and syntax of a class of morphologically complex structures in Yixing Chinese, a largely undescribed variety of Wu Chinese. We label the members of this class Non-Compositional Compounds (NCCs). These may appear morphemically identical to compositional constructions (CCs) such as Verb-Object sequences or Modifier-Noun expressions, or indeed synthetic compounds. However, they are a well-defined class which are semantically, syntactically and phonologically distinct from these constructions. These expressions also exist as a semantic and syntactic class in other Chinese varieties, including Mandarin, but the nature of Yixing tone sandhi provides us with additional evidence for their syntactic structure which would otherwise be unavailable.

Yixing Chinese shows an unusually complex system of tone sandhi. In common with Wuxi Chinese (Chan and Ren 1989), the language has two separate sandhi processes, applying within different domains. Following Chan and Ren, we label these processes Pattern Extension (PE) and Pattern Substitution (PS) respectively. Within the sandhi domain, PE deletes non-initial tone specifications, and extends the specification of the initial element across the domain – this process is familiar from other Wu varieties such as Shanghai Chinese (see e.g. Selkirk and Shen 1990, Duanmu 1999). PS entirely replaces one tonal specification with another, if it is followed by another tone-bearing syllable within the same domain, a process found in Min varieties such as Xiamen Chinese (see e.g. Chen 1987). In Yixing, the PS domain is always contained within a PE domain. If PS applies, then, PE also applies (but not necessarily vice versa). In what follows, we will identify the PE domain with the phonological phrase (φ), but the PS domain with the phonological word (ω). Most sandhi processes across Chinese dialects apply only to the larger domain, but because Yixing possesses a sandhi process applying at each level, the phonology allows us an unusually fine-grained picture of syntactic structure. As discussed below, NCCs always correspond to ω, which has implications for the analysis of their syntactic composition.

A number of semantic and syntactic diagnostics exist to distinguish NCCs from CCs. The most important diagnostic (which gives the class its name) is that the meaning of an NCC is not generally compositionally derived. Syntactic diagnostics can be found in the behaviour of coordination (while the components of a CC may be coordinated with those of another, the components of NCCs may not), and null argument reference (a null argument may refer to a component of a CC, but not of an NCC). Finally these constructions always form a phonological word – i.e. PS tone sandhi always applies within them. These facts are exemplified below (relevant NCCs or parts thereof in bold):

(1) *Semantic noncompositionality*
   a. *ʃâo* 'small' + *ʃý* 'book' > ***ʃáoʃý*** 'comic'
   b. *ʧʰɛ̃* 'eat' + *và* 'rice' > ***ʧʰɛ́vɑ̀*** 'dine'

(2) *Null argument reference*

a. **dzáŋsá yóu ɨ́ bàn **ʃáo-ʃý**, lísɨ́ yóu ɨ́ bàn wàŋ gə́*
Zhangsan have one CL small-book Lisi have one CL yellow LNK (*pro*)
(Intended: 'Zhangsan has a comic and Lisi has a yellow [book]')

b. cf. *dzáŋsá yóu ɨ́ bàn hào (láo) ʃý lísɨ́ yóu ɨ́ bàn wàŋ gə́*
Zhangsan have one CL good (ATTR) book Lisi have one CL yellow LNK (*pro*)
'Zhangsan has a good book and Lisi has a yellow one'

(3) *Coordination*

a. **tʰɔ́ ɨ́ tòu **ɲè** ɨ́ tòu mà ʃý*
he one side read one side sell books
(Intended: 'He was studying and selling books at the same time')

b. cf. *tʰɔ́ ɨ́ tòu dâŋ ɨ́ tòu mɔ̀ gə́ gə̀ wànɨ̌ŋ*
he one side hit one side curse that CL bad.person
'He was hitting and cursing that bad person at the same time.'

(4) *Tone Sandhi*

a. $(_{\varphi}(_{\omega}\text{ʃao}^{\text{LH L\%}}\,\text{ʃy}^{\text{H L\%}})) >_{\text{PS}} (_{\varphi}(_{\omega}\,\text{ʃao}^{\,\mathbf{H\ H\%}}\,\text{ʃy}^{\text{H L\%}})) >_{\text{PE}} (_{\varphi}(_{\omega}\,\text{ʃao}^{\,\text{H}}\,\text{ʃy}))\text{H\%}$
Surface Representation: [**ʃáoʃý**] (*[ʃâoʃỳ]) 'comics'

b. $(_{\varphi}(_{\omega}\text{ʃao}^{\text{LH L\%}})\,(_{\omega}\,\text{gə}^{\text{H L\%}})(_{\omega}\,\text{ʃy}^{\text{H L\%}})) >_{\text{PE}} (_{\varphi}(_{\omega}\text{ʃao}^{\text{LH}})\,(_{\omega}\,\text{gə})(_{\omega}\,\text{ʃy}))\text{L\%}$
Surface Representation: [ʃâogəʃỳ] (*[ʃáogə́ʃý]) 'small books'

We propose that these distinctions are captured by assuming (with Marantz 1997, Borer 2013, *inter alia*) that lexical items enter the derivation as uncategorised roots, and that the categorialisation process (assumed to be due due to the insertion of a [possibly null] categorial functional head) defines a boundary which prevents reference to their individual components. Syntactically, we analyse NCCs as uncategorised roots which are adjoined by a process of incorporation, which can be accounted for by the head movement theory of Roberts (2010), or following De Belder (2013). Their semantic noncompositionality can be accounted for under Borer's (2013) account, which proposes that a domain before the first merge of a functional head may form an atomic content unit: since no functional projection intervenes between the components of an NCC, the whole NCC can form an atomic content unit.

This accounts for the semantic and syntactic diagnostics of NCCs discussed above. This structure also gives us a way to capture the generalisation that NCCs always correspond to ω. We can observe independently that overt functional heads always correspond to ω. We can suppose, then, that a functional head always defines the boundary of ω. Then, if categorisation is triggered by the insertion of a functional head, the boundary of ω is defined by this functional head, and since NCCs, by hypothesis, only contain a single categorial head (at their edge), they constitute a single ω. This hypothesis is further supported by the behaviour of *overt* categorisers, which also combine with the preceding lexical item in a single ω, behaviour which is predicted by our analysis.

**References**

Chan, M. and Ren, H. 1989. "Wuxi Tone Sandhi: From First to Last Syllable Dominance", *Acta Linguistica Hafniensia* 21(2):35-64.

Chen, M. Y. 1987. "The Syntax of Xiamen Tone Sandhi", *Phonology Yearbook* 4: 109-149.

Borer, H. 2013. *Structuring Sense, Vol 3. Taking Form*. Oxford: OUP.

De Belder, M. 2013. *The root and nothing but the root: primary compounds in Dutch*, ms. Available at: http://ling.auf.net/lingbuzz/001749

Duanmu, S. 1999. "Metrical Structure and Tone: Evidence from Mandarin and Shanghai", *Journal of East Asian Linguistics* 8:1-38.

Marantz, A. 1997. "No Escape from Syntax", *University of Pennsylvania Working Papers in Linguistics 4.2*:201-225

Roberts, I. 2010. *Agreement and Head Movement: Clitics, Incorporation and Defective Goals.* Cambridge, MA: MIT Press.

Selkirk, E. & Shen, T. 1990. "Prosodic domains in Shanghai Chinese", in S. Inkelas and D. Zec (eds.), *The Phonology-Syntax Connection.* Chicago: University of Chicago Press.

# What phonology knows and doesn't know about syntax

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The goal of this talk is to address a central question in the syntax-phonology interface, namely: what does phrasal phonology know about syntax (Chen 1990)? Work based on current syntactic models using phases often proposes that prosodic domains are identical to spell-out domains. We argue in this talk that spell-out domains are not adequate to define the domains necessary for phonological processes. Instead, it is phase edges which play a central role in accounting for the prosodic phrasing properties of the languages we discuss. This proposal raises, though, two other central and related questions. First, does phrasal phonology 'know' about syntax directly or indirectly? Second, when does the phonology-syntax interaction take place? Most current phase-based theories of the interface assume a strict cyclic model of derivation where the output of each spell-out domain directly feeds the phonology. We argue instead for a non-cyclic model where phonology has access to the syntax only indirectly, when the syntactic derivation is complete. The data supporting these claims comes mainly from Bantu languages, which have been a focus of discussion and testing for theories of the phonology-syntax interface since the 1970s. Implications of the analysis for other languages will be discussed.

**The (Morpho-)Syntax – Phonology Interface in Complex Word Structures**

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Since Selkirk (1972) drew attention to the intricacies of the interaction between the application of phonological phenomena and syntactic structure, there has been a great deal of investigation into the nature of this interaction. Two main approaches have typically been taken according to which the phonological phenomena are accounted for i) by direct reference to syntactic structure (among many others Odden 2000; Elordieta 2007; Samuels 2009), or ii) by reference to a distinct phonological structure that is derived from, but not necessarily isomorphic to, syntactic structure (among many others Selkirk 1978; Nespor and Vogel 1986; Beckman and Pierrehumbert 1986; Truckenbrodt 1995). There are also some proposals to combine the two approaches (e.g. Kaisse 1985; Seidl 2001).

I will first briefly review some evidence that syntax alone cannot account for phrasal phonology. Once it is accepted that we cannot simply read phonological domains off (morpho-)syntactic structure, we must then ask what aspects of this structure are relevant for phonology, and how the phonology accesses the relevant information. Much of the discussion of these issues focuses on the larger structures which may be referred to broadly as Phonological Phases and Intonational Phrases.

There is much attention also focused on the Phonological Word (PW), but this often leaves a "gray area" of phenomena that are not adequately incorporated into the phonological hierarchy. The usual approach is to identify a relatively small core PW which serves a clear domain for such phenomena as stress, and certain phonotactic constraints and phonological processes. To maintain such a consistent domain, many elements must be excluded, for example, some types of affixes, clitics and multiple members of a compound. This rather heterogeneous collection of elements often finds itself grouped under an ill-defined label of recursive PW (PW'), although the properties of this type of PW are crucially distinct from those of the "usual" core PW. Two simple examples of this difference can be seen in relation to compounds: in English, word stress is generally assigned from the right edge of the word while compound stress generally applied from the left edge; in Hungarian, vowel harmony operates within a PW, but it does not operate throughout a compound, as each member constitutes its own harmony domain.

In this presentation, I will primarily examine the "gray area" of interface between the PW and the Phonological Phrase and assess to what extent several approaches (prosodic hierarchy, alignment, matching (cf. Selkirk 2011)) are able to account for the data. I will investigate phenomena at the more complex end of the spectrum, since simple cases may lend themselves more easily to multiple treatments. First, I will examine the phonological structure of the extensive sequences of morphemes claimed to form single words in polysynthetic languages. Although there may be ways to analyze such strings as words syntactically (cf. Baker 1996), I will extend the type of proposal advanced for polysynthetic languages such as Cree (Russell 1999) and Cayuga (Dyck 1994), where the sentence-like words are analyzed as containing multiple PWs. Second, I will examine the phonological structure of particularly complex compounds as in *The dog's [don't-leave-without-me bark]* (cf. *The dog's intruder bark*) and argue that an analysis in terms of a recursive PW fails to account for the phonology, in particular the stress patterns, of such constructions.

Finally, I will examine the polysynthetic and compound structures in light of a proposal I have advanced elsewhere that a phonological constituent, the Composite Group

(replacing the Clitic Group in Nespor and Vogel 1986 and others), is needed to account for the phenomena arising between the PW and the Phonological Phrase (e.g. Vogel 2009, 2010).

**References**


Baker, M. (1996). *The Polysynthesis Parameter*. Oxford. Oxford University Press.

Beckman, M. and J. Pierrehumbert (1986). Intonational structure in English and Japanese. *Phonology Yearbook* 3:255-310.

Dyck, C. (1994). The Definition of 'Word' in Polysynthetic Languages. In C. Dyck (ed.) *Proceedings of the Annual Conference of the Canadian Linguistics Association*. Toronto: University of Toronto Working Papers in Linguistics. pp. 187-203.

Elordieta, G. (2007). Segmental Phonology and Syntactic Structure. In G. Ramchand and C. Reiss (eds.) *The Oxford Handbook of Linguistic Interfaces*. Oxford: Oxford University Press. pp. 125-178.

Kaisse, E. (1985). *Connected speech: the interaction of syntax and phonology*. New York: Academic Press.

Nespor, M. and I. Vogel (1986/2007). *Prosodic phonology*. Dordrecht: Foris Publications.

Odden, D. (2000). The Phrasal Tonology of Zinza. *Journal of African Languages and Linguistics* 21:45-75.

Russell, K. (1999). The "Word" in two Polysynthetic Languages. In T. A. Hall and U. Kleinhenz (eds.) Studies on the Phonological Word. Amsterdam: Benjamins. pp. 203-221.

Samuels, B. (2009). *The structure of phonological theory*. PhD Dissertation. Harvard University.

Seidl, A. (2001). *Minimal indirect reference: A theory of the syntax-phonology interface*: Outstanding dissertations in Linguistics. New York: Routledge.

Selkirk, E. (1972). *The phrase phonology of English and French*. Outstanding Dissertations in Linguistics. New York: Garland Publishing Co.

Selkirk, E. (1978/1981). On prosodic structure and its relation to syntactic structure. In T. Fretheim (ed.) *Nordic Prosody II: Papers from a symposium*. Trondheim: TAPIR. pp. 111-140.

Selkirk, E. (2011). The Syntax-Phonology Interface. In J. Goldsmith, J. Riggle and A. Yu (eds.) *The Handbook of Phonological Theory, 2nd Edition*. Oxford: Blackwell Publishing.

Truckenbrodt, H. (1995). *Phonological phrases: Their relation to syntax, focus and prominence.* PhD Dissertation. MIT.

Vogel, I. (2009). The Status of the Clitic Group. In J. Grijzenhout and B. Kabak (eds.) *Phonological Domains: Universals and Deviations*. Berlin: Mouton de Gruyter. pp. 15-46.

Vogel, I. (2010). The Phonology of Compounding. In S. Scalise and I. Vogel (eds.) *Compounding: theory and analysis*. Amsterdam: John Benjamins. pp. 145-63.

**The Silence of Projecting Heads**

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Examination of sentence-final particles, complementizers, *up/down*-type particles, modal elements like *need*, the nominal character of agreement morphemes, aspect, tense, adjectives and adverbs, determiners, adpositions, focus and topic, derivational suffixes and light verbs leads to the conclusion that a preponderance of projecting syntactic heads are silent. I suggest that we understand this to reflect the simpler fact that all syntactically projecting heads are silent. That simpler fact derives in turn from the fact that, for reasons having to do with the systematic antisymmetry-based association of Merge with temporal order, phonological material cannot be bundled together with a syntactic feature in a single node. If so, then temporal order must be part of core syntax, as is suggested in any case by cross-linguistic asymmetries concerning backwards pronominalization that feed into interpretation. The antisymmetry-based prohibition against feature-bundling simultaneously has as a consequence the decompositionality principle of Kayne (2005).

# On the Distribution of Negative PPs

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**1 Puzzle:** Negative PPs can be classified into three types depending on whether they require Negative Inversion (NI). When preposed, the first type obligatorily requires NI, the second type does not require it, and the third type optionally requires it, as illustrated in (1-3).

(1) a. In no case should the bomb explode.
b. *In no case the bomb should explode.
(2) a. In no time, Tom had stolen the money.
b. *In no time had Tom stolen the money.
(3) a. With no clothes could she look attractive. (SN)
b. With no clothes, she looks attractive (CN)

It is well-known that sentential negation (SN) requires NI, but constituent negation (CN) does not. This means that only SN is permitted in (1), only CN is permitted in (2), and either SN or CN is permitted in (3). This paper explores the possibility of providing a principled account for the distribution of negative PPs including the pattern in (1-3).

**2 Universal vs. Existential Neg-operator**: There are two possible interpretations of the neg-operator *no*: the existential reading '- ∃' and the universal reading '∀-'. Interestingly, only the universal *no* triggers NI. For instance, *with no clothes* can be interpreted as a universal neg-operator or an existential neg-operator, and NI is required when it is a universal neg-operator: that is, (3a) gives only the reading in (4a), whereas (3b) produces only the reading in (4b).

(4) a. With any clothes –[she could look attractive]
b. With -∃x[x are clothes], she ...

*In no case* must be interpreted as a universal neg-operator: (1a) is interpreted as (5a), but not as (5b). By contrast, *in no time* cannot be used as a universal operator: (2a) is interpreted as (6a), but not as (6b). Interestingly, NI must take place in (1a), whereas it may not in (1b).

(5) a. In any case –[the bomb should explode]
b. *In -∃x[x is a case], the bomb should …
(6) a. In -∃x[x is time] (= immediately), Tom had stolen the money
b. *In any time –[Tom had stolen the money]

The question is why only the universal neg-operator can be a sentential negator. The universal operator is a two-place operator, requiring a restrictor and a nuclear scope. In (7) *no* cannot take its nuclear scope. In this context its Neg-feature percolates into the head of the adjunct PP as a last resort. As a result, it can take the matrix clause as its nuclear scope.

(7) [with$_{[Neg]}$ no$_{[Neg]}$ clothes]] [she could look attractive] = [with any clothes] –[she could …]

On the other hand, the existential *no* in (2a) and (3b) is a one-place neg-operator, and so there is no need for Neg-feature percolation. The gist of the claim is that only the two-place *no* can negate the matrix clause via Neg-feature percolation, and so requires inversion. *No* must be a two-place operator in (1), it cannot be a two-place operator in (2), and it can or cannot be a two-place operator in (3). Hence they display a different pattern in regard to inversion.

**3 Distribution of Negative PPs**: Let us now turn to the following question: why is inversion required when *no* is a two-place operator? I propose that NI follows from the constraint (8)—a revised version of the Neg-Criterion (Haegeman and Zanuttini 1991 and Rizzi 1996).

(8) T-adjacency: There must be nothing intervening between the relational negP and T.
(9) X intervenes between A and B if X asymmetrically c-commands A and is asymmetrically c-commanded by B.

The universal neg-operator is one of the relational neg-operators, since it negates the relation between its restrictor and its nuclear scope. The negative PP *in no case* contains a relational neg-operator, and so NI is triggered in (1) in accordance with the T-adjacency in (8). The question is why the relational neg-operator is subject to the T-adjacency. When the relational neg-operator is merged with its restriction and nuclear scope, the resulting structure denotes a proposition. The denotation of a proposition is made complete when it is accompanied by tense, which seems to be the reason that the relational neg-operator requires T to be adjacent.

This line of approach sheds light on the distribution of negative PPs. If the verb is accusative, negative PPs can occur either in the clause-medial or clause-initial position, but not in the clause-final position. By contrast, if the verb is unaccusative or passive, they can occur in all the three positions.

(10) a. She could on no account move to Paris.
b. On no account could she move to Paris.
c. ?*She could move to Paris on no account. (Accusatives)
(11) a. The secret should under no circumstances be revealed.
b. Under no circumstances should the secret be revealed.
c. ?The secret should be revealed under no circumstances. (Passives)
(12) a. The bomb should in no case explode.
b. In no case should the bomb explode.
c. ?The bomb should explode in no case. (Unaccusatives)

This pattern follows from (8). The negative PP can be adjacent to T in the clause-medial or clause-initial position. In the clause-final position, however, it cannot be adjacent to T if the verb is transitive, since adjunct PPs are adjoined to the intransitive verbal projection.

(13) a. She could [$_{vP}$ on no account [$_{vP}$ move to Paris]]: adjacent to T
b. [On no account could she ~~could~~ [$_{vP}$ move to Paris]]: adjacent to T
c. She could [$_{vP}$ v [$_{VP}$ [$_{VP}$ move to Paris [on no account]]]: not adjacent to T

In unaccusative and passive constructions, by contrast, the clause-final PP can be adjacent to T. The light verb v of those constructions does not assign a theta-role: vP is intransitive in (14) and PPs can be adjoined to the intransitive vP. According to the definition in (9), *[v explode]* does not intervene between *should* and *in no case* in (14). So (11c) and (12c) are acceptable.

(14) The bomb should [$_{vP}$ [$_{vP}$ v explode] in no case]: adjacent to T

**4 Extension**: This line of approach can be extended to the distribution of *not*. In (15a-c), for instance, *not* is relational in that it negates the relation between *in my house* and *you can smoke*. Relational negation obeys (8). Therefore, (15a) is well-formed while (15b-c) are not.

(15) a. Not in my house can you smoke.
b. *you can smoke not in my house.
c. *Not in my house you can smoke.

While assuming that the T-adjacency in (8) is descriptively correct, this paper explores the possibility of reinterpreting it from a derivational perspective.

**Syntactically Ergative = Morphologically Accusative**

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**Synopsis**: In this talk, I argue that syntactic ergativity (SYN-E) that is characterized by the ban on A'-movement of ergative (ERG) subjects is derived by moving the object (OBJ) higher than the transitive subject (SUBJ) as in (1), i.e. the outer Spec-VoiceP. Assuming the idea that only the highest phasal edge is accessible to further syntactic computations (Bošković 2013, Wurmbrand 2013b), I argue: **(i)** the high position of OBJ intervenes the access to ERG, capturing the fact that ERG cannot A'-move in SYN-E (cf. Aldridge 2004); **(ii)** *agent focus* in Kaqchikel/Q'anjob'al (Coon *et al.* 2011), *antipassive* in Dyirbal (Dixon 1994) and *resumptive pronoun* in Tongan (Otsuka 2006) all resolve the locality problem for the A'-movement of SUBJ.

**Proposals**: Assuming that Case-features are T-features (Pesetsky and Torrego 2001, 2004) and the morphological expression of case is determined by the case hierarchy by Marantz (1991) under Spell-Out Domain (SOD) basis (Baker, In progress), I propose that ERG in languages with SYN-E is derived by OBJ c-commanding SUBJ via moving OBJ to the higher phasal edge of VoiceP (Kratzer 1996). I.e., in (1), OBJ, which c-commands SUBJ, gets an unmarked case as NOM(inative)/ABS(olutive) whereas SUBJ gets a marked case as (ACC)usaitve/(ERG)ative at the Morphological/PF component. Therefore, this morphological-case assignment patterns with accusative languages; note also that the underlying argument structure is the same as accusative languages. This is a welcome result since even in languages with SYN-E, SUBJ-ERG shows some subject properties such as binding and control. For case assignment, I further argue that the calculation of case is not determined by the position of SUBJ/OBJ *per se*; rather it is contingent on the positions of T-features of SUBJ/OBJ. Let us then derive (2) as a sample case. In (3a), Voice assigns the value of T-feature of OBJ via AGREE (Chomsky 2000) with downward valuation (Wurmbrand 2013a). Then, in (3b), OBJ moves to the outer Spec-VoiceP (note that *v*/VP is Spelled-Out at the completion of VoiceP). Finally, the structure of (3b) is Spelled-Out, presumably at CP-phase level, whereby Morphology/PF will read the structural position of T-features and realizes the lower T-feature as ERG as in (3c). For the T-feature of SUBJ, I propose that it is valued by C (cf. Johnson 1991, Chomsky 2008), and I assume that AGREE(C, SUBJ) is not hindered by OBJ (cf. due to multiple AGREE, Hiraiwa 2005, omnivorous AGREE, Preminger 2011 or aggressive AGREE(ment), Legate 2008).

**Three Ways to Get SUBJ A'-extracted**: Languages with SYN-E do not allow A'-movement of ERG; for instance, Kaqchikel in (4) illustrates this point. For this, I argue that only the highest edge of VoiceP is accessible to A'-movement driven by C. However, there are three strategies to A'-move SUBJ by bleeding ERG: *agent focus* (AF) in (5a), *antipassive* (AP) in (5b) and *resumptive pronoun* (RP) in (5c).

**Agent Focus**: Let us start with AF in Kaqchikel/Q'anjob'al. Assuming in line with Coon *et al.* (2011) that AF is a head that licenses the Case-feature of OBJ (for us, the T-feature of OBJ), I propose the derivation in (6). In (6a), AF (i.e. *v*) AGREEs with OBJ for T-feature. Then, OBJ moves to Spec-*v*P as in (6b). Crucially, Voice's exponent is intransitive, so that it cannot assign T-feature, but it still selects SUBJ, which makes sense since ergative languages do not obey *Burzio's Generalization* (Laka 2000). I also assume that intransitive Voice is still phasal, triggering Spell-Out (cf. Legate 2003). Then, OBJ is shipped to the interfaces at the

completion of VoiceP, so that SUBJ and OBJ will never share SOD. Thereby, under the SOD-based case competition (Baker, In progress), SUBJ and OBJ appear in unmarked case, viz. NOM/ABS. Furthermore, there is only one Spec-VoiceP, which is SUBJ, whence it can be A'-extracted.

**Antipassive**: AP is a common way to render A'-movement of SUBJ possible in languages with SYN-E. Since it involves the demotion of OBJ to oblique/PP, OBJ does not need enter into an AGREE relation to be T-licensed. Thus, there is no OBJ-movement to Spec-VoiceP, wherefore SUBJ is accessible as in (7).

**Resumptive Pronoun**: Across languages, RP is one way to salvage the locality violation (Sells 1984). Therefore, even if OBJ moves to the outer Spec-VoiceP, sitting in the position higher than SUBJ, the locality violation of A'-moving SUBJ over OBJ is nullified by the presence of RP. Specifically, I assume that RP in Tongan is derived by MATCH(C, SUBJ) for *wh*-feature (Boeckx's 2001 *resumption as stranding*) as in (8a), so only the *wh*-feature moves as in (8b). The stranded T-feature of SUBJ will be pronounced as RP at Morphology/PF; SUBJ moved to Spec-CP then values C for *wh*-feature as in (8c).

**When ERG A'-extracted**: According to Erlewine (2013), in Kaqchikel, when an adverb intervenes a *wh*-extracted SUBJ and a predicate as in (9), AF is not usable and ERG morphology appears. Here, assuming in line with Erlewine (2013) that adverbs involve CP-recursion, I argue that when the A'-movement trigger (higher C1) and the assigner of T-feature to SUBJ (lower C2) split, ERG can be moved to Spec-CP1 as (10) shows. In (10a), the T-feature of SUBJ is valued by C2. Then, C1 responsible for *wh*-feature is merged, so that SUBJ enters into MATCH(C1, SUBJ) for *wh*-feature as in (10b), moving to Spec-CP1 and stranding its T-feature. For this movement, I propose that the locality is relativized to the type of features (Rizzi 2004). That is, when AGREE(C2, SUBJ) applies, the relevant feature is T-feature; when MATCH(C1, SUBJ) applies, it is *wh*-feature, so that RP is not required since there is no locality violation. Since the T-feature of OBJ still c-commands the stranded T-feature of SUBJ in (10c), ERG is embodied at Morphology/PF. In contrast, when CP does not split (i.e. when ERG cannot be A'-extracted), one single C is responsible for both *wh*- and T-features. Therefore, even if OBJ does not intervene the movement of SUBJ under *wh*-feature, it does block such a movement due to its T-feature, so that the highest phasal edge is the only target for the movement operation by C as proposed above.

(1) $[_{\text{VoiceP}}$ OBJ$_1$ $[_{\text{Voice'}}$ SUBJ-ERG Voice $[_{v\text{P/VP}}$ *v*/V $t_1]]]$

(2) *ŋuma-Ø yabu-ŋgu bura-n.*
father-ABS mother-ERG see-NONFUT
'Mother saw father.' (Dyirbal: Dixon 1994)

(3) a. $[_{\text{VoiceP}}$ SUBJ$_{[\text{T: __}]}$ Voice$_{[\text{T: } \textit{val}]}$ $[_{v\text{P/VP}}$ *v*/V OBJ$_{[\text{T: } \textit{val}]}]]$ AGREE(Voice, OBJ)
b. $[_{\text{VoiceP}}$ $[$OBJ$_{[\text{T: } \textit{val}]}]_1$ $[_{\text{Voice'}}$ SUBJ$_{[\text{T: __}]}$ Voice$_{[\text{T: } \textit{val}]}$ $[_{v\text{P/VP}}$ *v*/V $t_1]]]$ OBJ moves
c. C$_{[\text{T: } \textit{val}]}$… $[_{\text{VoiceP}}$ $[$OBJ$_{[\text{T: } \textit{val}]}]_1$ $[_{\text{Voice'}}$ SUBJ$_{[\text{T: } \textit{val}]}$-**ERG** Voice$_{[\text{T: } \textit{val}]}$ $[_{v\text{P/VP}}$ *v*/V $t_1]]]$ AGREE(C, SUBJ)

(4) **Achike n-Ø-u-löq' jun sik'iwuj?*
who INCOMPL-3SG.ABS-3SG.ERG-buy INDEF book
'INTENDED: Who buys a book?' (Kaqchikel: Assmann *et al.* 2012)

(5) a. *Maktxel max-ach il-on-i?* (Q'anjob'al AF)
who ASP-ABS2 see-**AF**-ITV
'Who saw you?' (Kaqchikel: Coon *et al.* 2011)

b. *Yabu-Ø* [*bural-ŋa-ŋu-Ø ŋuma-gu*] *banaga-n$^{y}$u.* (Dyirbal AP)
mother-ABS see-**AP**-REL-ABS father-DAT return-PST
'Mother, who saw father, was returning.' (Dyirbal: Dixon 1994)

c. *e fefine* [*na'a **ne** fili 'a Sione*] (Tongan RP)
DEF woman PST 3S choose ABS Sione
'the woman (who) chose Sione' (Tongan: Otsuka 2006)

(6) a. [$_{\text{VoiceP}}$ *wh*-SUBJ$_{[T:\ _]}$ Voice (ITV) [$_{vP}$ AF$_{[T:\ val]}$ [$_{VP}$ V OBJ$_{[T:\ \mathbf{val}]}$]]] AGREE(AF, OBJ)

b. [$_{\text{VoiceP}}$ *wh*-SUBJ$_{[T:\ _]}$ Voice (ITV) [$_{vP}$ [OBJ$_{[T:\ \mathbf{val}]}$]$_1$ [$_{v'}$ AF$_{[T:\ val]}$ [$_{VP}$ V $t_1$]]]] OBJ moves

c. [$_{\text{VoiceP}}$ *wh*-SUBJ$_{[T:\ _]}$ Voice (ITV) [$_{vP}$ [OBJ$_{[T:\ \mathbf{val}]}$]$_1$ [$_{v'}$ AF$_{[T:\ val]}$ [$_{VP}$ V $t_1$]]]] *v*P Spelled-Out

(7) [$_{\text{VoiceP}}$ *wh*-SUBJ$_{[T:\ _]}$ Voice-AP [$_{v/VP}$ *v*/V **[$_{PP}$ OBJ-OBL]**]]]

(8) a. C$_{[T:\ val][wh:\ _]}$ … [$_{\text{VoiceP}}$ [OBJ$_{[T:\ \mathbf{val}]}$]$_1$ [$_{\text{Voice'}}$ *wh*-SUBJ$_{[T:\ \mathbf{val}][wh:\ val]}$ Voice$_{[T:\ val]}$ [$_{vP/VP}$ *v*/V $t_1$]]]
MATCH(C, SUBJ) (NB. Thus what is important is the identity of features)

b. *wh*-SUBJ$_1$$_{[wh:\ val]}$ C$_{[T:\ val][wh:\ _]}$ … [$_{\text{VoiceP}}$ [OBJ$_{[T:\ \mathbf{val}]}$]$_1$ [$_{\text{Voice'}}$ **RP$_1$**$_{[T:\ \mathbf{val}]}$ Voice$_{[T:\ val]}$ [$_{vP/VP}$ *v*/V $t_1$]]]
*wh*-SUBJ moves, stranding its T-feature (NB. Word Order Irrelevant)

c. *wh*-SUBJ$_1$$_{[wh:\ val]}$ C$_{[T:\ val][wh:\ \mathbf{val}]}$…[$_{\text{VoiceP}}$ [OBJ$_{[T:\ \mathbf{val}]}$]$_1$ [$_{\text{Voice'}}$ **RP$_1$**$_{[T:\ \mathbf{val}]}$ Voice$_{[T:\ val]}$…]]AGREE(SUBJ, C)

(9) *Achike kanqtzij xutej/*xtj-ö ri wäy?*
who actually ate/ate-AF the tortilla?
'Who actually ate the tortilla?' (Kaqchikel: Erlewine 2013)

(10) a. ***Adverb*** C2$_{[T:\ val]}$ … [$_{\text{VoiceP}}$ [OBJ$_{[T:\ \mathbf{val}]}$]$_1$ [$_{\text{Voice'}}$ *wh*-SUBJ$_{[T:\ \mathbf{val}][wh:\ val]}$ Voice$_{[T:\ val]}$ … ]]
AGREE(C2, SUBJ): T-feature

b. C1$_{[wh:\ _]}$ ***Adverb*** C2$_{[T:\ val]}$ … [$_{\text{VoiceP}}$ [OBJ$_{[T:\ \mathbf{val}]}$]$_1$ [$_{\text{Voice'}}$ *wh*-SUBJ$_{[T:\ \mathbf{val}][wh:\ val]}$ Voice$_{[T:\ val]}$ … ]]
MATCH(C1, SUBJ): *wh*-feature

c. [*wh*-SUBJ$_{[wh:\ val]}$]$_1$ C1$_{[wh:\ \mathbf{val}]}$ ***Adverb*** C2$_{[T:\ val]}$ … [$_{\text{VoiceP}}$ [OBJ$_{[T:\ \mathbf{val}]}$] [$_{\text{Voice'}}$ $t_{1[T:\ \mathbf{val}]}$ Voice$_{[T:\ val]}$ … ]]
SUBJ moves to Spec-CP1 as *wh*-movement, stranding its T-feature; SUBJ values C1's *wh*-feature

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# Labeling through Spell-Out

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**Synopsis:** This paper proposes that a particular conception of the Spell-out operation provides a hitherto unnoticed way of determining a label of otherwise unlabeled syntactic objects (SOs). It is shown that this proposal simplifies the grammar and gains several theoretical and empirical consequences, eliminating certain unnecessary complications in Chomsky's (2013) framework where some instances of movement are forced by the need of labeling.

**Background:** Chomsky (2013) argues that if Merge takes a head H and a phrase XP as its input, the label of the resulting SO can be determined unambiguously due to minimal search, as in (1a). If Merge takes two phrases as its input as in (1b), however, the so-called labeling problem arises: The label of the resulting SO cannot be determined. Chomsky (2013) offers two ways of determining a label of the unlabeled SO: (i) By raising either XP or YP or (ii) By sharing prominent features of XP and YP. Thus, if XP in (1b) raises under the option (i), then the resulting SO gets labeled as Y, as in (2a). On the other hand, if XP and YP agree with each other in terms of a feature F under the option (ii), then the whole SO gets labeled as F, as in (2b). The option (ii) operates on final landing sites of movement, while the option (i) operates on departure and intermediate sites.

(1) a. Merge(H, XP) → $[_{H}$ H XP]
    b. Merge(XP, YP) → $[_{?}$ XP YP]
(2) a. $XP_i \ldots [_{?}\ t_i$ YP] → $XP_i \ldots [_{Y}\ t_i$ YP]
    b. $[_{?}$ $XP_{[F]}$ $YP_{[F]}$] → $[_{F}$ $XP_{[F]}$ $YP_{[F]}$]

Specifically, Chomsky (2013) suggests that (i) provides a motivation for apparently unmotivated movements, for instance, successive-cyclic wh-movement in (3a) and raising from a predicate-internal subject position in (3b). For Chomsky (2013), they are forced by the need of labeling.

(3) a. $[_{?}$ $DP_{wh}$ CP] → $DP_{wh} \ldots [_{C}\ t_{DP}$ CP]
    b. $[_{?}$ $DP_{Subj}$ *v*P] → $DP_{Subj} \ldots [_{v}\ t_{DP}$ *v*P]

**Issues:** The idea that movement is motivated by labeling raises several issues, however. First, it is not clear how the idea that movement is motivated by labeling accommodates to the copy theory of movement. To be precise, the trace $t_i$ in (2a) is in fact a copy of XP, so even though XP has moved out of the SO, some additional assumption is required so as to render the lower copy invisible to labeling. Actually, considering the fact that there are certain cases where a trace/copy is visible to agreement (Holmberg & Hróarsdóttir 2003), merely being a trace/copy is not sufficient for it to be invisible to labeling since Agree is also assumed to be subject to minimal search in Chomsky (2013). Let us consider (4). In (4b), the trace blocks agreement between 'seem' and *hestarnir* 'the horses' unlike (4a), where the trace does not block the relevant agreement relation. This is not expected if a lower copy is always invisible to minimal search.

(4) a. Mér$_i$ virðast $t_i$ [hestarnir vera seinir]
me.dat seem.pl the.horses.nom be slow
'It seems to me that the horses are slow'
b. Hvaða manni$_i$ veist þú að virðist
which man.dat know you that seem.3sg
b'. *virðast $t_i$ [hestarnir vera seinir]
seem.pl the.horses.nom be slow
'To which man do you know that the horses seem to be slow'

Second, there is a redundancy regarding the motivation of movement. In the derivation of (5a), for example, *buy* and *which book* are Merged at the first relevant step as in (5b):

(5) a. Which book did you buy?
b. [$_V$ buy [which book]]

Crucially, the label of the resulting SO here can be determined since *buy* is a head, but nonetheless wh must move. This means that movement of wh in (4) requires a motivation other than labeling, say, certain uninterpretable features involved in the usual probe-goal system (see, e.g., Pesetsky & Torrego 2001, 2004 and Bošković 2007). Then, it would not be unreasonable to assume that such features motivate successive-cyclic movement as well, which makes the claim that labeling triggers movement redundant. Another similar issue arises in the case of raising of a subject. For instance, the subject in (6) should raise regardless of whether the predicate is a head (i.e. *good*) or a phrase (i.e. *a genius*). Then, if the subject is forced to move even when the predicate is a head (hence the label of the small clause (SC) can be determined), the same motivation, independent of labeling, should hold for movement in (6b) as well. Then, labeling as the motivation of movement seems to be redundant.

(6) a. A student$_i$ seems [$t_i$ good]
b. A student$_i$ seems [$t_i$ a genius]

**<u>Proposal</u>:** The issues disappear if the labels of SOs in (3) can be determined by an independently motivated operation. Then, we propose that a particular implementation of Spell-out provides a way to determine a label of an otherwise unlabeled SO. Suppose we have a structure like (7a), where the label of the whole SO cannot be determined since $DP_{wh}$ and non-interrogative C (notated as $C_{[-Q]}$) do not agree with each other (i.e. (1b)). Under Chomsky's (2013) system, $DP_{wh}$ in (7a) is forced to move by the need of labeling. However, without recourse to movement, the SOs can be labeled by making use of Spell-out. Specifically, we propose, following Narita (2011), that the SO {$C_{[-Q]}$, TP} is changed into a single head $C_{[-Q]}$ as a result of the Spell-out process applying to TP as in (7b) (putting aside the possibility that Spell-out applies to the complement of DP as well since it is unclear how cyclic Spell-out and the phasehood of D interact). This yields a configuration like (7c). Then, the label of (7c) can be determined by minimal search as in (7d). The label of the SO {$DP_{Subj}$, *v*P} in (3b) can be determined in the same way. Importantly, a label of the SOs in (3) can be determined in exactly the same way as the simplest case in (1a), namely, the [$_H$ H XP] structure.

(7) a. [$_?$ $DP_{wh}$ [$_C$ $C_{[-Q]}$ TP]]
b. [$_?$ $DP_{wh}$ [$_C$ $C_{[-Q]}$ ~~TP~~]]
c. [$_?$ $DP_{wh}$ $C_{[-Q]}$]
d. [$_C$ $DP_{wh}$ $C_{[-Q]}$]

The idea of <u>labeling through Spell-out</u> significantly simplifies the grammar because we do not

have to assume that movement is sometimes driven by the need of labeling but sometimes not. We can maintain the idea that there is a unique driving-force for movement (whatever it turns out to be), so the redundancy concerning cases like (5) and (6) disappears. Furthermore, our proposal is consistent with the copy theory. That is, even when the wh in (7d) undergoes further movement to a higher position, the label of the SO {<$DP_{wh}$>, $C_{[-Q]}$} (<$DP_{wh}$> = a lower copy) can be determined without manipulating <$DP_{wh}$>. Since labeling through Spell-out is in fact a case of labeling by minimal search, it follows that labels can be determined by already-existing devices; feature-sharing and minimal search.

**Consequences:** Several important ideas about SCs can be embodied in the phase theory under our proposal. Several researchers have argued that there must be a functional head in SCs that introduces a SC predicate and its subject (Kitagawa 1985, Bowers 1993, a.o.). More recently, it is claimed that the head in fact serves as a phase-head (den Dikken 2006, Ko 2011, a.o.). Significantly, our proposal provides a novel theoretical rationale for these ideas. To see this, let us reconsider (6b). If *a student* is Merged directly with *a genius* (cf. Stowell 1981) as in (8a), the label of the SC remains undetermined: Movement of *a student* does not help under our proposal and there is no head that triggers Spell-out. Hence, there must be a head $H^0$ that triggers Spell-out of *a genius*, rendering the remaining structure labelable by minimal search as in (8b). What is novel here is that our proposal offers the reason why $H^0$ is a phase-head; otherwise Spell-out is not possible, and hence the label of the SO remains undetermined. One may think that postulating $H^0$ also solves the problem for Chomsky's (2013) idea regarding (6) because it eliminates the difference between (6a) and (6b). For Chomsky (2013), however, movement offers a way of determining the label of the SC in (6a-b), no matter whether $H^0$ is present or not. In this sense, the necessity of $H^0$ is not justified. On the other hand, our proposal provides a rationale for why we need $H^0$ and why it is a phase.

(8) a. [a student]$_i$ seems [$_?$ <a student> [a genius]]
b. [$_?$ [a student] [$H^0$ [a genius]]] → [$_?$ [a student] [$H^0$ ~~[a genius]~~]] → [$_H$ [a student] $H^0$]

The above-mentioned consequence about $H^0$ provides a further consequence for *there*-constructions. It is not clear under Chomsky's (2013) system why *a student* in (9a) does not have to move if it involves a structure like (9b). Note that it seems reasonable to assume that there is no feature-sharing between the two phrases in (9b). Then, the label of the SO in (9b) cannot be determined, so that the subject should be forced to move, contrary to fact. On the other hand, once we admit the existence of $H^0$ in *there*-constructions as in (9c), no problem arises. $H^0$ in (9c) triggers Spell-out of its complement (i.e. *in the room*) and the label of the resulting SO {a student, $H^0$} can be determined by minimal search. Hence, the labels of the SOs in examples like (9a) can be fully determined, allowing in-situ subjects.

(9) a. There is a student in the room.
b. [[a student] [in the room]]
c. [[a student] [$H^0$ [in the room]]]

In this way, our proposal can unify the separate ideas about SCs and *there*-constructions, providing a novel theoretical rationale for them in terms of the recent phase theory with labeling. All in all, our proposal that Spell-out provides a way of labeling not only simplifies the grammar by removing the unnecessary complications but also supports a particular definition of phasehood.

**References**: **Chomsky, N.** 2013. Problems of projection, *Lingua* 130.| **den Dikken, M.** 2006. *Relators and linkers*, MIT Press.| **Ko, H.** 2011. Predication and edge effects, *NLLT* 29.| **Holmberg, A and T. Hróarsdóttir** 2003. Agreement and movement in Icelandic raising

constructions, *Lingua* 113.| **Narita, H.** 2011. *Phasing in Full Interpretation*, Ph.D. diss., Harvard U.

**Silent Adjectives. The Case of Complex Resultatives in the Locative Alternation.**

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The aim of this paper is to argue that the stipulation of *silent adjectives* that undergo incorporation in a locative frame is a possible solution accounting for the difference between the locative alternation in Germanic languages and Romance languages with respect to complex resultatives, coupled with the assumption that there is conflation (merge) of manner onto the verb in Germanic langages (rather than incorporaton, i.e. movement), unlike in Romance, where only the Path is conflated. More specifically, as presented in Mateu (2001), unlike the locative alternation in English, the locative alternation in Romance languages does not allow complex resultatives, and Romanian makes no exception:

(1) a. John rubbed the fingerprints off the crystal ball.
b. John rubbed the crystal ball clean of fingerprints.
c. *Ion a frecat urmele de degete de pe globul de cristal.
John has rubbed prints-the of fingers of on ball of crystal.
'John rubbed the fingerprints off the crystal ball.'
d. *Ion a frecat globul de cristal curat de urme de degete.
John has rubbed ball-the of crystal clean of prints of fingers.
'John rubbed the crystal ball clean of fingerprints.'

This is explained by Mateu (2001) as a consequence of English being satellite-framed (it conflates Manner, and it expresses Path as a satellite e. g. *She danced into the room.*), and Romanian verb-framed (it conflates Path).

In this paper, I would like to focus on complex adjectival resultatives, and argue that the difference between Germanic and Romance lies in the fact that, in Romance, *silent adjectives* are present, and they are incorporated into the verb. While in English, the adjective can be present, and actually, must be present, the variant where the adjective is not present being ungrammatical:

(2) a. He loaded the truck full of hay.
b. *He loaded the truck of hay.

the variant where the adjective is silent (and undergoes incorporation) is the only one possible in Romance.

Moreover, there is yet another interesting difference between Romance and Germanic with respect to the locative frame, namely, the presence of an *of*-variant in the Romance case, absent in the English variant, as argued by Damonte (2005) for Italian:

(3) a. I loaded the sand on the truck.
b. I loaded the truck with sand.
c. *I loaded the truck of sand.

(4) a. Ho caricato la sabbia sul camion.
have-1sg loaded the sand on-the truck
'I have loaded the sand on the truck.'
b. Ho caricato il camion con la sabbia.
have-1sg loaded the truck with the sand
'I have loaded the truck with sand.'
c. Ho caricato il camion di sabbia.
have-1sg loaded the truck of sand.
'I have loaded the truck with sand.'

I will argue that, in fact, this can also be explained by resorting to a silent adjective *pieno,* which selects the preposition *di.* Postulating silent adjectives such as *full (of),*or *pieno (di),* which must be incorporated in Romance, but are not incorporated in English accounts for the differences we have observed. While in languages where manner is conflated (merge) into the verb, such as English, the adjective has to be fully expressed, as it cannot incorporate into a conflated verb, in languages where we are dealing with incorporation (movement) of the manner into V, such as Romanian, the adjective is silent, and it incorporates (incorporation into a category that has already incorporated another category is possible).

Furthermore, the case of *silent adjectives* can lead to interesting questions concerning what it takes for an element to be silent (headedness, semantic redundancy), since literature has focused on silent verbs and silent nouns (Kayne 2005), but not so much on silent adjectives (Constantinescu 2007).

In conclusion, in explaining the crosslinguistic differences between locative frames with respect to complex resultatives, a possible solution is resorting to the concept of *silent adjective,* and the difference between incorporation and conflation in the case of verb-framed/ satellite-framed languages.

**References**

Constantinescu, Camelia. 2007. "On some Romanian (A de A) degree constructions." In Pitar Moş: a Building with a View. Papers in Honour of Alexandra Cornilescu, edited by Gabriela Alboiu, Andrei Avram, Larisa Avram and Daniela Isac, 65-85. Bucharest: BUP.

Damonte, Federico. 2005. "Classifier Incorporation and the Locative Alternation"*, Brugè, Laura et al. (eds.), Contributions to the thirtieth Incontro di Grammatica Generativa, Venezia: Libreria Editrice Cafoscarina,* 2005, pp. 83-103.

Hale, Ken, & Samuel Jay Keyser. 2002: *Prolegomenon to a Theory of Argument Structure,* Cambridge: MIT Press

Kayne, Richard. 2005. "Silent Years, Silent Hours", *Movement and Silence*, Oxford: OUP

Mateu, Jaume. 2002. "Lexicalization patterns and the locative alternation". http://filcat.uab.cat/clt/publicacions/reports/pdf/GGT-01-5.pdf

**Investigating Subject Specificity in Postverbal Modal Constructions**

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Chinese exhibits its analyticity at all levels and provides a good perspective to syntactic-semantic correspondence under the cartographic approach (Rizzi 1997; Cinque 1999). Through the comparative study of Mandarin Chinese and Hakka dialect, this paper presents a syntactic account for the subject specificity in the remarkable postverbal constructions, and explores (a)symmetries occurring in the modal licensing mechanism (Tsai and Chung 2013). A fine-grained structure of modals is offered to empirically capture the subject specificity in the modal constructions and to theoretically illustrate the visibility of subjects, which is crucial to successfully applying the modal licensing.

Subject indefinites in Mandarin must be licensed by certain strategies to fulfill the specificity requirement, such as *you* 'have/ exist' or modals under the (Extended) Mapping Hypothesis (Diesing 1992; Tsai 2001), as shown in (1). Things go more interesting when we consider Hakka dialect, as illustrated in (2). The modal *tet* has two alternations with distinctive interpretations, namely *capacity* in (2a) V-*tet*-R and *permission* in (2b) *zotet*-V. Both can accommodate subject indefinites interpreted as quantity and individuals respectively.

(1) a. * **(you)** liang-ge ren yiqian jian-guo Akiu.
exist two-CL person before meet-EXP Akiu.
'There are two people who met Akiu before.' [Subject: specific individual]

b. wu-ge ren **chi-de -wan** shi-wan fan.
five-CL person eat-can-finish ten-CL rice [Subject: quantity]
'Five people can finish ten bowls of rice.' [Tsai (2001), ex (25), (26)]

(2) a. sam-me ngin **siid-tet-log** ge-vog fan. **V-*tet*-R**
three-CL person eat-TET-RES that-CL rice [Subj: quantity; Modality: capacity]
'Three people can [are able to] finish that wok of rice.'

b. sam-me ngin **zotet** **siid** ge-vog fan. ***Zotet*-V**
three-CL person do-TET eat that-CL rice [Subj: individual; Modality: permission]
'Three people can [are permitted to] eat that wok of rice.'

Drawing the interaction between the modality and the subject specificity, two types of licensing mechanisms are proposed: the quantity subject is licensed by the capacity modal, while the individual subject depends on the *ought-to-do* deontic (Tsai and Chung 2013). However, (3) raises a problem to the modal licensing in that the *ought-to-do* deontic fails, if *tet* is realized as V-*tet*, rather than *zotet*-V as that in (2b).

(3) *(iu) sam-me ngin ***siid-tet*** ge-vog fan. **V-*tet***
exist three-CL person eat-TET that- CL rice [Subj: specific individual]
'Three people can [are permitted to] eat that wok of rice.' Modality: permission]

Fortunately, this asymmetry is just an apparently counterexample to the modal licensing, and provides a good perspective to the visibility of inner subject, leading to a better understanding of the VP-Internal Subject Hypothesis (Sportiche1988; Koopman & Sportiche1991, among others). 0) and 0) demonstrate sophisticated operations for a successful licensing mechanism, which is proposed to divide into two steps: (i) the indefinite inner subject should be visible for a further syntactic procedure; (ii) the modal licensing applies and licenses the subject indefinite:

(4) [$_{IP}$ outer subject [$_{MPDeo}$ $zo_i$ ***-tet***$^{\textbf{ought-to-do}}$ [$_{\exists P}$ [$_{vP}$ inner subject [$_{v'}$ $t_i$ [$_{VP}$ V ]]]]]]

(ii) Licensing ← (i) Visible

(5) a. [$_{IP}$ outer subject [$_{MPDeo}$ [$V_i$-$v$]$_j$ ***-tet*** [$_{\exists P}$ [$_{vP}$ inner subject [$_{v'}$ $t_j$ [$_{VP}$ $t_i$ ]]]]]]

(ii) ⊘ (i) Invisible

b. [$_{IP}$ ***iu***$^{\exists}$-outer subject [$_{MPDeo}$ [$V_i$-$v$]$_j$ ***-tet***$^{\textbf{ought-to-do}}$ [$_{vP}$ inner subject [$_{v'}$ $t_j$ [$_{VP}$ $t_i$ ]]]]]

More specifically, V-*tet* on a par with its counterpart *zotet*-V as a potential environment for the modal licensing, the failure in (3) can be reduced to the invisibility of the inner subject, which is thematic-defined subject rather than a grammatical-defined one (Manning 1996). Syntactic procedures are blind to the inner subject of V-*tet* (marked in grayscale), including the modal licensing. Another contrast is detected in the scope of quantifiers exemplified by (6), which further supports the scopal isomorphism (Huang 1982; Auon and Li 1993). Either inner or outer subject in *zotet*-V construal is visible for the quantifier *gog* 'each' to quantify, while in V-*tet* construal, only the outer subject is visible and then can be quantified. The syntactic representations are sketched as 0).

(6) a. iu sam-me se-ngin-e **gog** zotet **gog** siid liong-kuai biang-e.
exist three-CL little-person each do-TET each eat two- CL cookies

b. iu sam-me se-ngin-e **gog** siid-tet (***gog**) liong-kuai biang-e.
exist three-CL little-person each eat-TET each two- CL cookies
'Each of three kids can [are permitted to] eat two cookies.'

(7) a. [$_{IP}$ [ three kids]$_j$ **each** [$_{MPDeo}$ $zo_i$ -*tet*$^{\text{ought-to-do}}$ [$_{vP}$ $t_j$ [$_{v'}$ $t_i$ **each** [$_{VP}$ V ]]]]]

b. [$_{IP}$ [three kids]$_k$ **each** [$_{MPDeo}$ [$eat_i$-$v$]$_j$ -*tet*$^{\text{ought-to-do}}$ [$_{vP}$ $t_k$ [$_{v'}$ $t_j$ ***each** [$_{VP}$ $t_i$ ]]]]]

To recap, this paper from a comparative perspective scrutinizes the modal-licensing mechanism to capture the distribution and interpretation of subject indefinites. This analysis, if on the right track, is advantageous in: (i) the grammaticality of the flip-flop constructions provides a piece of empirical evidence for the two-way distinction of deontics and their licensing mechanisms. (ii) Cross-linguistically, the modal licensing mechanisms are attested in Taiwan Southern Min, also leading to the capacity-permission contrast as in (2). (iii) The contrast within two types of *ought-to-do* deontics in Hakka, V-*tet* and *zotet*-V, opens an issue at the visibility of inner subject. (iv) The most desirable consequence is that the licensing

mechanism resorts to external syntax of modals, showing a high analyticity, the characteristic property of Modern Chinese (Chao 1968; Huang 2005).

**Selected References:** **Cinque,** Guglielmo. 1999. *Adverbs and Functional Heads*. Oxford: Oxford University Press. **Huang,** C. T. J. 2005. Syntactic analyticity and the other end of the parameter: Lecture Notes LSA Linguistic Institute. **Manning**, Christopher D. 1996. *Ergativity: Argument Structure and Grammatical Relations*. Stanford, CA: CSLI Publications. **Rizzi**, Luigi. 1997. The Fine Structure of the Left Periphery. In *Elements of Grammar*, ed. By L. Haegeman, 281-338. **Tsai,** Wei-Tien Dylan. 2001. On Subject Specificity and Theory of Syntax-Semantics Interface, *JEAL* 10, 129-168.

**The Case for the Absence of Informational Features in syntax**

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Currently, the most influential approach to information structure (Cartography, Rizzi 1997) posits movements of the phrases bearing discourse functions to devoted positions, driven by discourse features such as topic, focus etc. It has the advantage of accounting for the rigid order in which discourse functions tend to appear. However this view has been recently challenged by authors that try to expel pragmatic features from syntax (Horvath 2010) and show that the word order can be explained by the means of other constraints such as Relativized Minimality (Neeleman and Vermeulen 2012).

In this paper, I shall follow the latter view, with important changes, though. Horvath 2010 defends that discourse functions come in two types: those encoded as truth-conditional features in syntax (e.g. exhaustivity) and those arising at the interface (e.g. contrast). Here I claim that they can be treated in a more uniform way: They are all interpretively derived at the interface between semantics and information module on the basis of truth-conditional features encoded in syntax. There are four features, triggering movements to devoted positions. Thus I keep some intuitions from Cartography, though limiting them to a minimal set of positions.

1) To begin with, the phrases located in the left periphery of the clause never bear a single discourse function, but rather always carry a bundle of features such as [topic+aboutness] or [focus+contrast]. Note that *aboutness topic* or *contrastive focus* are here treated as complex notions, since I take to be topics phrases marked as old information (sometimes called continuous/familiar topics when they are not aboutness topics) and to be focus the informational part of the sentence (sometimes called "information focus"). This suggests that *aboutness topic* etc. may not move up in a single swoop, but may check these features stepwise. This intuition is in line with the observation that some phrases bearing a single discourse function such as topic or focus remain lower than the CP in the structure, moving up in some languages if attracted by a strong feature, but crucially not further than the vP-edge, interestingly a phase edge (see among many others Jayaseelan 2001, López 2009). This makes predictions regarding what can appear in a sentence. If a feature is checked, it cannot trigger another movement, so that there should not be, for example, sentences with both a contrastive and an information focus, if a contrastive focus is an information focus+contrast. This is borne out across languages (Horvath 2010 for Hungarian, Titov in Neeleman and Vermeulen 2012 for Russian).

2) Moreover, a reassessment of information structure must also take into account that no position is devoted to a discourse function. Rather, it can be shown that a projection hosting topics etc. also hosts phrases bearing other functions and that the feature common to these phrases and discourse-function-bearing phrases may be of another nature than informational. For example, in *wh*-questions, but not in *yes/no* questions, foci are precluded, which suggests that *wh*Ps and focus are in competition with each other, probably for the checking of a feature they share. Interestingly, as shown by the position wrt to adverbs in French, *wh*P *in situ* (1a) and focused XPs (2a) stop at the vP-edge in some languages rather than actually being *in situ*. I argue that this analysis carries over to so-called Hungarian foci *in situ* (see also Jayaseelan 2001 for Malayalam). Note that 1/2b are only acceptable with an interpretation of *souvent* as a *local* focus particle and not as a sentential adv, much as *only* can be.

(1) a. √Vous écoutez **quoi** souvent? b. ?Vous écoutez souvent **quoi**?
you listen to what often

(2) a. √Vous écoutez **du jazz**[foc] souvent. b. √Vous écoutez souvent **du jazz**[foc].
you listen to jazz often

**I propose here** that in fronted *wh*-languages, the *wh*P also first stops in this lower vPedge projection before moving further up to the CP domain. If I am right, this projection cannot be devoted to focus. It has a functional head bearing a feature common to foci and *wh*Ps. Importantly, I do not endorse Rooth's 1992 idea that focus builds up a set of alternatives. Focusing on *Mary* in (3) does not imply that no other people came. Among the others, it is possible that some people came and others did not, and that the speaker is not even aware of what the set of candidates is (compare with Horvath 2010:1356-7). Thus, in this context, cognitively, no alternative set is necessarily built by the focus, contrary to contrastive focus.

(3) Question: Whocame? Answer: (At least) Mary[foc] came.

Therefore, I tentatively propose that the head against which foci and *wh*Ps check their features is an operator of assertion. It first asserts the existence of the referent of the phrase it interacts with (in a process cognate to the way givenness applies to an individual, rather than to a proposition in Schwarzschild 1999). It then asserts the role this individual plays in the open proposition constituted by the presupposed part of the sentence.

3) In the same, vP-edge area, there is a position devoted to topics and accounting for scrambling in Malayalam, German and Dutch (Jayaseelan 2001). I propose that this position is not actually a topic position, but rather a presupposition position.

4) In *wh*-questions, contrastive topics (CT) and foci (CF) seem to be excluded as well (look at (4) where the phrases marked as CT are pronounced with the rising contour specific to CT (see Büring 2003)). This probably means that CT, CF and *wh*Ps all bear a feature so far called *contrast* (Repp and Cook 2010, Neeleman and Vermeulen 2012) or *exhaustivity* (Horvath 2010), but that **I would like to rephrase *alternation***, since it is responsible for effects such as question semantics or Rooth's alternative semantics, in that it builds a set of alternative propositions. Note that *wh-in situ* may check it at a distance, unless they have a different semantics, but I leave this question aside here. There is also a position in the left periphery devoted to this operator (*pace* Horvath 2010). Finally, I assume an operator above, responsible for the veridical status of the proposition as in Faure 2012.

*Context: A: I met Mary and Charlene at the mall*
(4) B: #What was Mary[CT] doing there? What was Charlene[CT] looking for?

We end up with **four features** (underlined in the text)**, projecting four phrases**, thus achieving a result close to López's 2009. Interestingly, the four features are all semantic and truth-conditional, i.e. are attached to propositional operators, thus making uniform the cause of Ā-movements. This means that the interpretation as topic or focus is acquired by a phrase only as a secondary interpretation at the interface between semantics and information module. Furthermore, other pragmatic operations are based on the interpretation of semantic features such as the illocutionary force of an utterance, which is, in the cartographic approach, mixed

up in the split left periphery, since FocusP hosts the interrogative *wh*Ps (interacting with the speech act of questioning) and ForceP can arguably host topics (Faure 2012).

**References**

**Büring**, Daniel 2003. On D-trees, beans, and B-accents. *Ling. and Philosophy* 26:511-545.
**Faure,** Richard 2012. Resolutive predicates and the syntactic and semantic selection of questions. In N. Goto et al. eds., *Proceedings of GLOW in Asia IX*, Mie University, 93-108.
**Horvath**, J. 2010. 'Discourse features', syntactic displacement and the status of contrast. in Repp and Cook 2010.
**Jayaseelan**, K. A. 2001. IP-internal topic and focus phrases. *Studia Linguistica* 55:39-75.
**López**, Luis 2009. *A Derivational Syntax for Information Structure*. Oxford-New York: OUP.
**Neeleman**, Ad, and **Vermeulen**, Reiko eds. 2013. *The Syntax of Topic, Focus, and Contrast. An Interface-based Approach*. vol. 113. *Studies in Generative Grammar*. Berlin: De Gruyter.
**Repp**, S., and **Cook**, P. eds. 2010. *Lingua 120(6), Issue on Contrast*. Amsterdam: Elsevier.
**Rizzi**, Luigi 1997. The fine structure of the left periphery. In *Elements of grammar*, ed. L. Haegeman, 281-337. Dordrecht: Kluwer.
**Rooth**, Mats, 1992, A Theory of focus interpretation, *Natural Language Semantics* 1:75-116.
**Schwarzschild**, Roger 1999. Givenness, AvoidF and other constraints on the placement of accent*. *Natural Language Semantics* 7:141-177.

# Null Anaphoric Possessor Arguments of Kinship Nouns and Long-Distance Binding in Mandarin

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Researchers have noticed that relational nouns have an extra implicit argument inherent in their lexical meaning, but it is still unclear whether this argument is pronominal or anaphoric, and whether it is a theta assigned syntactic argument or only a semantic argument (Asudeh, 2005; Barker, 1995; Culicover & Jackendoff, 1995; Jackendoff, Maling, & Zaenen, 1993; Partee & Borschev, 2003; among others). To the best of our knowledge, no experimental evidence has been presented to directly address these questions. This study provides experimental evidence for a theta interpreted anaphoric possessor argument associated with kinship nouns, as a prototype of relational nouns, in Mandarin Chinese (MC). We also argue that there is a strong correlation between the interpretation of implicit possessors associated with kinship nouns and long-distance binding observed across languages.

We conducted two experiments indicating the syntactic presence of such an argument and the existence of a c-command requirement on its antecedent. A Truth value judgment task paradigm (TVJT, Crain & Thornton, 1998) was adopted. 17 and 15 university students were tested in Experiments one and two, respectively. The experimenter told a puppet and the participants a story. After the story, the test sentences were presented by the puppet. The participants would judge the truth value of the sentences. Typical examples of test and control sentences in Experiment 1 and 2 follow. Each experiment consists of 4 test items and 4 control items.

Exp. 1 (1) a. test sentence: Zhangsan dai-le ***erzi*** qu Qingdao.
Zhangsan bring-Asp **son** to Qingdao.
"Zhangsan brought his son to Qingdao."

b. control sentence: Zhangsan dai-le ***xiaogou*** qu Qingdao.
Zhangsan bring-ASP **dog** to Qingdao.
"Zhangsan brought his dog to Qingdao."

Exp. 2 (2) a. test sentence: Zhangsan zai Lisi zhuyuan zhiqian dai ***erzi*** qu Qingdao.
Zhangsan at Lisi hospitalize before bring **son** to Qingdao.
"Zhangsan brought his son to Qingdao before Lisi was hospitalized."

b. control sentence: Zhangsan zai Lisi zhuyuan zhiqian dai ***xiaogou*** qu Qingdao.
Zhangsan at Lisi hospitalize before bring **dog** to Qingdao.
"Zhangsan brought his dog to Qingdao before Lisi was hospitalized."

The test sentences employ kinship nouns while the control sentences do not. Note that in (2), *Zhangsan* c-commands the kinship noun *erzi* 'son' in (2a) and *xiaogou* 'dog' in (2b), while *Lisi* doesn't. Given the context that Zhangsan brought Lisi's son but not his own son to Qingdao, the participants consistently judge the test sentences as a false statement in both experiments over 88% of the time. However, when the kinship noun *erzi* "son" was replaced by a non-kinship noun such as *xiaogou* 'dog' (1b/2b), the participants consistently accepted the sentences as true characterizations of the context, over 91% of the time.

The striking difference supports our proposal that there is a null possessor in the syntactic representation of kinship, and that only nouns which c-command the kinship nouns can be taken as their antecedents. We therefore propose the structure of kinship nouns is [DP POSSESSOR [N]], where POSSESSOR is the extra argument of the kinship noun, and it can

be null or overtly realized as a Possessive Phrase. When it is null, this extra argument is obligatorily bound by a c-commanding antecedent.

We also propose that this extra argument is anaphoric rather than pronominal: this hypothesis is based on at least four similarities we identify between the syntactic properties of this extra argument and the reflexive *ziji* 'self' in MC (Huang & Tang, 1991), such as C-command requirement, as shown in Experiment two, long distance binding, tendency to refer to the subject rather than the object, and blocking effect.

If the extra arguments of kinship nouns are anaphoric and their syntactic properties are similar to reflexives like *ziji*, this raises the possibility of a correlation in the occurrence of these two properties across languages. That is, if a language has bare kinship nouns that could be long-distance bound, it will also have a long-distance bound reflexive as a counterpart to *ziji* in MC. In the languages we investigated, we found evidence for a possible correlation between the existence of long-distance bound anaphoric possessor arguments of kinship nouns and long-distance bound reflexives, as summarized below: Italian, Dutch, Norwegian, Korean, Japanese, Russian have both long-distance bound reflexive (Cole, Hermon, & Sung, 1990; Progovac, 1993; Rappaport, 1986; Reinhart & Reuland, 1993; Sportiche, 1986) and long-distance bound null anaphoric possessor argument (Berns, 2008; Corver, 2007; Thunes, 2013), while Spanish and German have neither. The data concerning kinship nouns in Spanish, German are collected from consultants, and the same for the data concerning reflexive in Korean, Spanish and German.

**References**:


Asudeh, A. (2005). Relational Nouns, Pronouns, and Resumption. Linguistics and Philosophy, 28(4), 375-446. doi: 10.1007/s10988-005-2656-7

Barker, C. (1995). Possessive descriptions. Stanford, CA: CSLI Publications.

Berns, R. (2008). Evolution of the definite article in the Italian possessive construction: The case of kinship terms. MA Thesis, University of Amsterdam.

Cole, P., Hermon, G., & Sung, L.-M. (1990). Principles and Parameters of Long-Distance Reflexives. Linguistic Inquiry, 21(1), 1-22. doi: 10.2307/4178657

Corver, N. (2007). Dutch 'Proper name + -s'. Linguistics in the Netherlands, 24(1), 74–85.

Culicover, P. W., & Jackendoff, R. (1995). Something Else for the Binding Theory. Linguistic Inquiry, 26(2), 249-275. doi: 10.2307/4178897

Huang, C.-T. J., & Tang, C.-C. J. (1991). The local nature of the long-distance reflexive in Chinese. In J. Koster & Eric Reuland (Eds.), Long distance anaphora (pp. 263-282): Cambridge University Press.

Jackendoff, R., Maling, J., & Zaenen, A. (1993). Home Is Subject to Principle A. Linguistic Inquiry, 24(1), 173-177. doi: 10.2307/4178807

Partee, B. H., & Borschev, V. (2003). Genitives, relational nouns, and argument-modifier ambiguity. In C. Fabricius-Hansen, E. Lang & C. Maienborn (Eds.), Modifying Adjuncts. Berlin: Mouton de Gruyter.

Progovac, L. (1993). Long-Distance Reflexives: Movement-to-Infl versus Relativized SUBJECT. Linguistic Inquiry, 24(4), 755-772. doi: 10.2307/4178839

Rappaport, G. C. (1986). On Anaphor Binding in Russian. Natural Language & Linguistic Theory, 4(1), 97-120. doi: 10.2307/4047603

Reinhart, T., & Reuland, E. (1993). Reflexivity. Linguistic Inquiry, 24(4), 657-720. doi: 10.2307/4178836

Sportiche, D. (1986). Zibun. Linguistic Inquiry, 369-374.

Thunes, M. (2013). The inalienability pattern of English and Norwegian. Bergen Language and Linguistics Studies, 3(1).

# The Acquisition of Relative Clause Comprehension in Mandarin Speaking Children with SLI

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It has been found that in languages with head-initial relative clauses (RC), such as English, where the head noun precedes the clause, children with specific language impairment (SLI) have more difficulty with object relative clause (ORC) comprehension like (1b) than with subject relative clause (SRC) comprehension like (1a) (Adams 1990; Friedmann & Novogrodsky 2004, 2007; Guasti et al. 2012). Similar to English, Mandarin Chinese has an SVO word order. The main difference between Chinese head-final RC and English head-initial RC is the position of the head noun with respect to the modifying clause, as shown in (2). No studies have been reported about the RC comprehension in Mandarin speaking children with SLI. The present study is to find out whether the similar subject–object asymmetrical pattern exists in Mandarin and to provide theoretical explanations.

(1) a. the girl$_i$ that $t_i$ kisses the grandmother. (SRC)
b. the girl$_i$ that the grandmother kisses $t_i$. (ORC)

(2) a. t qin nainai de nuhai$_i$ (SRC)
kiss grandma De girl
'the girl that kisses the grandmother'
b. nainai qin t de nuhai$_i$ (ORC)
grandma kiss De girl
'the girl that the grandmother kisses'

Comprehension of subject and object relatives was assessed by using two binary sentence-picture matching tasks. 36 children divided into three groups with ten boys and two girls each participated in the experiment. The three groups include one experimental group (SLI group aged 4;0-6;3) and two control groups: the typically developing age-matched (TDA) group which include children with the same age as SLI children and the typically developing younger group (TDY) group (aged 2;11-4;11) who are younger than SLI children but with the same language ability as SLI children measured by MLU.

As shown in Table 1, Mandarin speaking children with SLI have more difficulties in comprehending SRO than in ORC. Noun Phrase Accessibility Hierarchy (Keenan & Comrie 1977) and Structural Distance Hypothesis (O'Grady 1997) used to explain ORC comprehension difficulty in English SLI children cannot be applied in Mandarin case. To explain the syntactic impairment observed in the present study, we adopted the approach of Relativized Minimality (RM, Rizzi 1990, 2004). It has been suggested that SLI children cannot identify the thematic role of the head, as their grammar cannot specify edge feature (EF) of the moved element, leading to RM effects. As seen in (5), the subject intervenes between the head and the gap in English ORC, while in (6) there is no such an intervener. It is in SRC in Mandarin that RM effects arise, i.e. the object intervenes between the head (girl) and the gap(t) in Chinese SRC as seen in (7), whereas there is no such an intervener in Chinese ORC between the head (girl) and the gap(t) as shown in (8).

(5) [$_{DP}$ the girl [$_{CP}$ ø [$_{C}$ that] [$_{TP}$ the grandmother is kissing ø]]] (ORC)

(6) [$_{DP}$ the girl [$_{CP}$ ø [$_{C}$ that] [$_{TP}$ ø is kissing the grandmother]]] (SRC)

(7) [$_{DP}$ [$_{CP}$ [$_{TP}$ ø qin nainai] [$_{C}$ de] ø ] nuhai] (SRC)
t kiss grandma De girl
'the girl that kisses the grandmother'

(8) [$_{DP}$ [$_{CP}$ [$_{TP}$ nainai qin ø] [$_{C}$ de] ø ] nuhai] (ORC)
grandma kiss t De girl
'the girl that the grandmother kisses'

SRC comprehension might be used as a clinical marker in the diagnosis of SLI Children who speak Mandarin.

**Table 1 Correct Percentages of Relative Clause Comprehension**

| groups | types | mean | sd |
|---|---|---|---|
| SLI | SRC | 63.3% | .228 |
| | ORC | 83.3% | .194 |
| TDA | SRC | 100% | .000 |
| | ORC | 100% | .000 |
| TDY | SRC | 80.6% | .259 |
| | ORC | 86% | .259 |

**References**


Adams, C. 1990. Syntactic comprehension in children with expressive language impairment. International Journal of Language & Communication Disorders 25(2): 149-171.

Friedmann, N., & Novogrodsky, R. 2004. The acquisition of relative clause comprehension in hebrew: A study of sli and normal development. Journal of Child Language 31(3): 661-681.

Friedmann, N., & Novogrodsky, R. 2007. Is the movement deficit in syntactic SLI related to traces or to thematic role transfer?. Brain and Language 101(1): 50-63.

Guasti, M. T., S. Stavrakaki, & F. Arosio. 2012. Cross-linguistic differences and similarities in the acquisition of relative clauses: Evidence from Greek and Italian [J]. *Lingua*. 122(6), 700-713.

Keenan, E. L., & Comrie, B. 1977. Noun phrase accessibility and universal grammar. Linguistic inquiry: 63-99.

O'Grady, W. 1997. Syntactic development. Chicago ; London: University of Chicago Press.

Rizzi, L. 1990. Relativized minimality: The MIT Press.

Rizzi, L. 2004. Locality and left periphery. Structures and beyond. The cartography of syntactic structures 3: 223-251.

# V2 and V3 in Modern Eastern Armenian

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**Introduction**: In this talk we consider word order phenomena in Modern Eastern Armenian, henceforth MEA. In particular, we analyze the position of the auxiliary, an enclitic element (as argued at length by Dum Tragut, 2009), which often, even if not always, occupies the second position in the clause. We link this property to the characteristics of the left periphery of the clause in MEA, following the cartographic framework, as sketched in Rizzi (1997), Cinque (1999) and subsequent work.

MEA is considered in the current literature (cf. for instance Dum Tragut, 2009; Tamrzanian, 1994) an SOV language, with quite a *free* word order. In this paper however, we show that the ordering options in which the auxiliary precedes the verb are actually constrained by syntactic V2 properties, i.e. are due to the necessity for the auxiliary to raise to a left peripheral position. We also argue that the structure exhibiting V3 – or occasionally even V4 – orders can only occur when the first constituent is not moved, but base-generated as a topic in the left periphery.

The aim of this work is twofold. On one hand, it is a step towards a principled and theoretical account of word order in MEA. On the other, it contributes at clarifying the nature and properties of V2 and V3 structures.

**The data:** In MEA all verbal forms, the present tense included, are periphrastic, i.e., they are constituted by a clitic auxiliary and a participle – with the exception of the aorist, which is synthetic. There are two word orders for assertions, which are usually considered unmarked in the literature (we are considering here only definite objects. Indefinites exhibit different properties and distribution, which cannot be discussed in this work):

| | | | | | |
|---|---|---|---|---|---|
| (1) | Sirane | kerel | e | salore | |
| | Siran | eaten | has | plum.the | |
| (2) | Sirane | salore | | KEREL | e |
| | Siran | plum.the | | eaten | has |
| | 'Siran ate the plum' | | | | |

In these examples, the auxiliary is cliticized on the verb and nothing can appear in between. At a closer scrutiny, however, the two sentences do not exactly have the same interpretation, in that in (2) the participle appears to be contrastively focused and subject ad object are both topics – whereas in (1) *the plum* is an informational focus. Hence, (1) is a felicitous answer to the question *what did Siran do*? Whereas (2) is a felicitous answer to the question *what did Siran do to the plum*? The auxiliary can precede the verb and cliticize on any other phrase, in which case any number of items might interpose between Aux and V (capital letters signal contrastive focus):

| | | | | |
|---|---|---|---|---|
| (3) | SIRANN | e | kerel | salore |
| | Siran | has | eaten | plum.the |
| (4) | SALORN | e | Sirane | kerel |
| | plum.the | has | Siran | eaten |
| | 'Siran has eaten the plum' | | | |

In sentences (3)-(4) the phrase preceding the auxiliary is interpreted as a contrastive focus. The auxiliary cannot appear in first position:

(5) *e kerel Sirane salore
has eaten Siran plum.the

The following structure, however, is grammatical:

(6) KEREL e Sirane salore
eaten has Siran plum.the

In example (6), the verb itself is focused.

**Hypothesis**: We propose that sentence (1) is derived via movement of the subject in agreement position and cliticization of the auxiliary on the verb, as a PF requirement, starting from a canonical VO order (Kayne 1994). **The other orders are derived via movement of the auxiliary in the (contrastive) Focus position** (see Rizzi 1997), **obligatorily followed by movement of a phrase in its spec.** The auxiliary therefore appears to be a clitic in second position, i.e. the Wackernagel position (for a discussion of V2 phenomena in this vein, see Anderson, 1993). According to our hypothesis, in (2) the auxiliary is in focus, the verb is in the spec of focus, and subject and object are topics. Notice that in these cases, contrastive focus is *not* associated to a phonological contrastive stress.
We show that all the phrases preceding contrastive focus are interpreted as topics, giving rise to V3 (or even V4) configurations. Apparently, no topic follows the auxiliary. Hence, the auxiliary, when not enclitic on the verb, *marks* the lowest position of the left periphery, as independently suggested by Benincà nd Poletto (2004). On the basis of a long tradition of studies, beginning with Cinque (1990), we argue that topics on the left of Focus are base generated. We discuss evidence from reconstruction effects, such as for instance the one concerning the interpretation of the possessive anaphor *ir*. *Ir* is in *complementary distribution* with the pronoun *nra* (which in a sentence such as (7) can only take reference from outside the sentence):

(7) Nra hore ANNAN-é barevel.
His father ANNA-has greeted
'ANNA greeted his father'
(8) *Ir hore ANNAN-é barevel.
Self's father ANNA-has greeted
'ANNA greeted self's father'

In both cases *Anna* is a focus, as expected. We argue, on the basis of the full paradigm of the distribution of the anaphor, that the ungrammaticality of (8) is due to the impossibility for the anaphor to reconstruct. Hence, it is base generated. Finally, our hypothesis can also explain the different properties of the aorist, a synthetic verbal form:

(9) Sirane kerav salore
Siran ate(AOR) plum.the
(10) Sirane salore kerav
Siran plum.the ate(AOR)
'Siran ate the plum'

*Siran* in (9) and *salore* in (10) can optionally be contrastively focused. However, in this case they must bear a *phonological* contrastive stress. We argue that this is an argument in favor of the presence of a contrastive focus head, which in absence of the auxiliary is empty and must be realized phonologically.

**References**

**Anderson S**., 1993, Wackernagel's revenge: clitics, morphology and the syntax of the second position, Lingua, 69, 1; **Benincà, P. & C. Poletto**, 2004, 'Topic, Focus and V2. Defining the CP sublayers', in Rizzi, The structure of CP and IP, 52-75; **Cinque, G**., 1999, Adverbs and Functional Heads, OUP, New York; **Dum-Tragut J**., 2009, Modern Eastern Armenian. Amsterdam-Philadelphia: John Benjamins; **Tamrazian A.,** 1994, The syntax of Armenian: Chain and the Auxiliary, PhD Diss., UCL, UK; **Rizzi, L.,** 1997, The fine structure of the left periphery, In Haegeman, Elements of Grammar, Kluwer.

**Modal and Tense-Aspect Interactions in Bangla**

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This paper aims at discussing the tense-aspect interface with Bangla modal *para*. Bangla modal *para* (which behaves like *can* in English) expresses possibility both in the given certain circumstances of the base world and what is known in the base world. In the sense, Bangla modal *para* has both epistemic and root readings.

1. Amrita Khel-te par-e (Bangla)
   Amrita play-NFP can-3rd person.present tense
   'Amrita can play.'

In (1) the modal *para* has a variety of interpretations, e.g., (i) Amrita has the ability to play, (ii) Amrita has the permission to play, and (iii) It is possible for Amrita to play. In (i) and (ii) the modal base is circumstantial and the ordering source for (i) is ability and deontic for (ii). In (iii) the modal base is epistemic and the ordering source is stereotypical (Hacquard 2010).
Bhatt's and Hacquard's accounts of the *actuality entailment* and the implicative readings of the ability modal respectively are possible on the relative position of the modal with respect to aspect. Bhatt(1998, 2004) notes and Hacquard (2008) provides an account of, the so-called actuality entailments with root modals with the perfective aspect, absent with the imperfective aspect. Our aim in this paper is to apply the same theory to progressive aspect. In Bangla, there is an overt aspectual distinction. Perfective aspect with (*-lo*) morphology, imperfective aspect with (*-t*) morphology and progressive aspect with (*-chh*) morphology When *para* interacts with the Bangla progressive morphology (*-chh*), the proposition expressed by its complement holds in the actual world and not just in some possible world.

2. Amrita khel-te par-chh-e #kintu khel-chh-e na
   Amrita play-NFP can-prog-3rd per, present tense #but play-prog-3rd per.pres no
   'Amrita is being able to play. # but not playing.'
   [$_{TP}$Pres [$_{ASPP}$Prog [$_{MODP}$Can [$_{VP}$Amrita play]]]]

   (2) ENTAILS (3)

3. Amrita khel-chh-e (Bangla)
   Amrita play-prog-3rd per. present tense
   'Amrita is playing.'
   [$_{TP}$Pres [$_{ASPP}$Prog [$_{VP}$Amrita play]]]

4. Amrita gai-te par-chh-e #kintu gai-chh-e na
   Amrita sing-NFP can-prog-3rd per.present tense #but sing-prog -3rd per.pres no
   'Amrita is being able to sing. # but not singing.'
   [$_{TP}$Pres [$_{ASPP}$Prog [$_{MODP}$Can [$_{VP}$Amrita sing]]]]

   (4) ENTAILS (5)

5. Amrita gai-chh-e (Bangla)
   Amrita sing-prog-3rd per. present tense
   'Amrita is singing.'
   [$_{TP}$Pres [$_{ASPP}$Prog [$_{VP}$Amrita sing]]

Whereas, when *para* interacts with imperfective morphology (-t) the implicative effect of aspect on modal is not established.

6. Amrita khel-te par-t-o (Bangla)
   Amrita play-NFP can-impf-3rd person.past tense
   'Amrita had the ability to play.'

   (6) DOES NOT ENTAIL (7)

7. Amrita khel-l-o
   Amrita play-past-3rd per.past tense
   'Amrita played.'

When the root modal interacts with the imperfective aspect, no actual event is forced as imperfective brings in an additional layer of modality, itself responsible for removing the necessity for an actual event (Hacquard 2009). But with progressive the account holds in the actual world. (6) has a habitual and a counterfactual reading. In Bangla (unlike the languages discussed in Condoravdi 2002), the modal with the perfect morphology has actuality entailments, but counterfactual interpretations (which we, following Abusch 2013 assume involve root rather than a special "metaphysical" modality) are expressed with the –to suffix (imperfective/"conditional" morphology).
We also note that any tense aspect morphology except for a default present tense on the modal *para* in Bangla excludes the epistemic reading and retains other root readings.

8. Amrita naach-te par-l-o (Bangla)
   Amrita dance-NFP can-past-3rd per.past tense
   'Amrita could dance.'

Our account of the difference between the progressive on the one hand, and the imperfective on the other hand relies on an "extensional" account of the progressive (Landman 2002, Higginbotham 2004) combined with Hacquard's (2008) account of the way modals interact with aspect. We assume that root modals take scope under aspect whereas epistemic modals take scope over aspect. On this theory (simplifying somewhat), (2) will get the interpretation (9).

9. There is an event in the actual world located in the present interval, and there is a world compatible with the circumstances in the actual world where that event is a process of playing by Amrita.

The situation with the progressive under Past tense is exactly parallel, as is the case of progressives with accomplishments. On Hacquard's account the actuality entailment follows from (9) and what she calls PED (the principle of Preservation of Event Description Across Worlds). This differs from parallel examples with imperfective morphology on its habitual as well as counterfactual interpretations, which involve quantifying over possible worlds rather than the assertion of something about an event in the actual world. An account of the counterfactual reading of modals with the perfective/conditional modality is also provided.

**Selected References** (1) Bhatt, R. 1999. *Covert Modality in non-finite contexts*, UPenn Dissertation. (2) Condoravdi, C. 2002. "Temporal Interpretation of Modals" (3) Hacquard, V. 2009. "On the Interaction of Aspect and Modal Auxiliaries", *L&P*.

**On some asymmetries between passives and topic/relative structures and their theoretical implications for argument structure theory in syntax**

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In general, if a sentence can be passivized, it can also be topicalized or relativized (*Lisi bei Zhangsan kanjian-le* 'Lisi was seen by Zhangsan'; *Lisi*, *Zhangsan kanjian-le* 'Lisi, Zhangsan saw'; *Zhangsan kanjian de na-ge ren* 'the man that Zhangsan saw'). However, an asymmetry arises between an indirect (adversative) passive and its topicalized and relativized counterparts:

(1) a. Zhangsan bei wo jichu-le yi-zhi quanleida. (passivization)
Zhangsan BEI I hit-LE one-CL home-run
'Zhangsan had I hit a home run [on him].'
b. *Zhangsan, wo jichu-le yi-zhi quanleida. (topicalization)
Zhangsan I hit-LE one-CL home-run
'Zhangsan, I hit a home run [on him].'
c. *wo jichu-le yi-zhi quanleida de na-ge ren (relativization)
I hit-LE one-CL home-run DE that-CL man
'The man whom I hit a home run on.'

Huang (1999) attributes the asymmetry in (1) to Case theory. (1a) is derived as in (2): The outer object of VP, as a null operator (NOP), adjoins to the Spec of the embedded IP1. The passive verb *bei* and IP1 form a complex predicate and NOP is bound by the matrix subject *Zhangsan*. Being external to V', the outer Spec, VP is not a Case position, and hence accepts an A-trace, but not an A'-trace. After predication has occurred, NOP is deleted in LF, resulting in the NOP trace being directly A-bound and reinterpreted as an A-trace, which does not need Case. However, the same process does not save the topicalization structure (1b) and the relative clause (1c), because binding by a topic or the head of a relative is still a case of A'-binding, and hence the NOP trace remains as A'-trace which requires a Case. Thus, (1b, c) are ruled out by the Case Filter.

(2) $[_{IP2}$ Zhangsan$_i$…$[_{V'}$ $_V$bei $[_{IP1}$ NOP$_i$ $[_{IP1}$ wo$_j$...$[_{VP}$ t$_i$ $[_{VP}$ [ t$_j$ $[_{V'}$jichu-le yi-zhi quanleida]]]]]]]]
Zhangsan BEI I hit-LE one-CL home-run

However, there is a problem to this account. In (3a, b), the outer (or applicative) object *Lisi* clearly must have Case (given the sentences' grammaticality):

(3) a. Zhangsan chi-le Lisi liang-wan mian
Zhangsan eat-LE Lisi two-bowl noodle
'Zhangsan ate Lisi two bowls of noodle.'
b. Zhangsan ku-lei-le Lisi
Zhangsan cry-tired-LE Lisi
'Zhangsan cried and made Lisi tired.'

However, the same asymmetric pattern is observed, as in (4-6):

(4) a. Lisi bei Zhangsan chi-le liang-wan mian
Lisi BEI Zhangsan eat-LE two-bowl noodle
'Lisi had Zhangsan eat him two bowls of noodle.'
b. Lisi bei Zhangsan ku-lei le
Lisi BEI Zhangsan cry-tired LE
'Lisi had Zhangsan cry on him and became tired.'

(5) a. *Lisi, Zhangsan chi-le liang-wan mian
Lisi Zhangsan eat-LE two-bowl noodle
'Lisi, Zhangsan ate two bowls of noodle.'
b. *Lisi, Zhangsan ku-lei le
Lisi Zhangsan cry-tired LE
'Lisi, Zhangsan cried and got tired.'

(6) a. *Zhangsan chi-le liang-wan mian de na-ge ren
Zhangsan eat-LE two-bowl noodle DE that-CL person
'the man whom Zhangsan ate two bowls of noodle'
b. *Zhangsan ku-lei le de na-ge ren
Zhangsan cry-tired LE DE that-CL man
'the man whom Zhangsan cried and made tired'

Tang (2009) assumes that passivization involves a variable produced by syntactic movement, while topicalization does not have any movement but a pro which becomes a variable when being bound by a topic, as shown in "$[_{XP}$ topic$_i$ $[_{YP}$ ... e$_i$ ...]]". The possibility of topicalization is affected by the verbs' transitivity. When the verb's transitivity is not strong, YP is a complete sentence and the hearer cannot figure out an empty category within it. Therefore, topicalization is impossible. One problem of his analysis is that many linguists (Huang 1982, 1987, 2010, Li 1990, Ning 1993, Shyu 1995 i.a.) have argued that, while some topic structures may be formed by base-generating a pro, *some* must involve movement.

**Analysis**: We propose that the asymmetries between passivization on the one hand and topicalization and relativization on the other follow from the nature of syntactic derivation and the optionality of non-core arguments. Core arguments (those obligatorily selected by main verbs) can be topicalized or relativized, while non-core arguments (like affectees or applicatives which are optionally selected by main verbs) cannot. (Some patterns of ellipsis also exhibit core-noncore asymmetry. See Li 2010 for examples). Unlike core-arguments, non-core arguments occur typically in a non-Case position, as a sister to V' or VPs, and do not receive structural Case from V. Suppose that a non-core argument remains Caseless throughout derivation in Narrow Syntax, including the operation of topicalizaiton and relativization. This can immediately derive the fact that non-core arguments can be passivized but not topicalized or relativized, since Caseless traces cannot serve as variables bound by the topic or the relative operator.

A problem that remains is how to derive the grammatical sentences (3a, b). It must be that overt lexical non-core arguments do have Case at some level of representation. To account for this state of affairs, we propose the hypothesis that lexical non-core arguments are assigned Case in PF. Both the verb *chi* 'eat' in (3a) (which assigns Case to its direct object *liang-wan mian* 'two bowls of noodle') and the verb *ku* 'cry' in (3b) (which is intransitive) do not assign Case to the non-core argument *Lisi*. In order to be able to assign Case, the relevant verb must move and combine with the higher light verb denoting DO or CAUSE which is responsible

for assigning Case to the non-core arguments. To derive (3a, b), we simply assume that the V-v movement in Chinese occurs in PF. The relative lateness of this operation is yet another manifestation of the high degree of syntactic analyticity in Modern Chinese. So, in Narrow Syntax, the non-core argument still occurs above (to the left of) the verbs, without Case. At the time topicalization or relativization occurs, V has not moved to the higher CAUSE/DO position, and hence *Lisi* is without Case, which makes it ineligible for A-bar movement. *Lisi* will eventually receive Case after verb-movement takes place, but this occurs derivationally "too late" to interact with other grammatical operations, in particular, too late to make the variable visible to LF computation.

**SELECTED REFERENCES**: Huang, C.-T. James. 1999. Chinese passives in comparative perspective. *Tsing Hua Journal of Chinese Studies* 29: 423–509; Tang, Sze-wing. 2009. Huati ju de xingcheng [the formation of topic sentences]. In Gong Cheng & Danqing Liu (eds.), *Hanyu de Xingshi yu Gongneng Yangjiu* [*Researches on the form and functions of Chinese*], 36-49. Beijing: Shangwu Yinshu Guan [The Commercial Press].

**Degree Adverbs and the Syntax of Focus-Sensitivity**

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Some degree adverbs are subject to non-locally-induced syntactic constraints. In (1c, 1d), for example, nothing about the adjective phrase *per se* restricts the distribution of degree adverbs. Instead, the syntactic environment beyond it is the culprit.

(1) a. This student is **so/too/that** clever.
b. I have never met **so/too/that** clever a student.
c. ***So/*too/*that** clever students solved the problem.
d. ***So/*too/*that** clever a student solved the problem.

These non-local dependencies are unexpected if those degree adverbs are merely treated as elements immediately above a local AP, QP or predicative projection, as suggested by current accounts (Bresnan 1973, Abney 1987, Corver 1997, Kennedy & Merchant 2000, Borroff 2006, Troseth 2009). These analyses also offer little to say about degree-like adverbs that only occur in specific clause types, such as *ever* in (2a) and *zhen* in (2b). (McCawley 1988)

(2) a. (Boy,) Is your mother **ever** young!
b. ni mama **zhen** nianqing! (Chinese)
your mother ZHEN young

(3) a. *Is your mother **ever** young?
b. *ni mama **zhen** nianqing ma?
your mother ZHEN young Q

In light of these dependencies, I propose a syntactic analysis treating those degree and degree-like adverbs as focus-sensitive adverbs, with properties such as (i) focus semantics: the adverbs attach to some constituents and introduce a set of alternatives relevant for the interpretation of the sentence, (ii) clausal scope: they are reflexes of functional heads heading clausal projections, (iii) non-peripheral positions: they usually do not occur at the peripheral positions of a clause, (iv) movement: they may induce movement, (v) limited depth of embedding: they obey certain locality constraints w.r.t their scope position, (vi) obey hierarchy of functional heads: their distribution is regulated by the presence and order of other clausal functional heads.

My arguments for this proposal are as follows. I show that a sentence like *the student is too clever* can be paraphrased as:

(4) There is some state, 'the student is *x*', *x* is some degree of cleverness, *x* is to be replaced by some excessive degree so the state has potentially negative results. Other potential alternatives where *x* is replaced by less degrees of cleverness have no negative effects.

I show this sort of semantic decomposition underlies all instances of degree adverbs, and make them similar to other focusing adverbs such as *even*, *only*, and *also*. In addition, the fact that degree adverbs are relatively less restricted when attached to predicative adjectives ((1a) vs. (1c)) is compatible with an analysis where degree adverbs are clausal operators instead of mere adadjectival modifiers, since predicative adjectives are part of clausal projections. Furthermore, when non-clausal constituents are headed by inherently clausal heads, such as

Q(uantifier), which undergoes QR, DAs can easily attach to them. They are covertly 'piggybacked' to the left periphery of a clause.

(5) **Too many** people saw John. (cf. (1c))

This again supports a clausal operator analysis for DAs. Fourth, the fact that they induce robust overt DegP movement (cf. 1b) is akin to that of movement induced by focusing adverbs. Fifth, their limited distributions with attributive adjective are similar to other clausal operators that have limited embedding possibilities (cf. (5)).

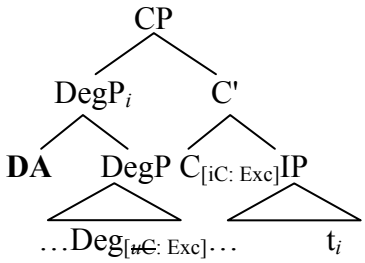
(6) I know the **only**/***even** clever student. (narrow scope only)

Sixth, just as focusing adverbs and quantifiers are limited with respect to the presence or word order of other similar expressions (6a), due to possibility some kind of universal functional hierarchy, certain DAs are subject to similar constraints (6b).

(7) a. *John **only definitely** saw Peter.
b. *Boy, are **many** student **ever** clever!

To substantiate the claim with a derivational syntactic theory, I adopt Chomsky's (2000 *et seq*.) Agree theory. I propose that some degree adverbs are a result of *feature valuation*. More specifically, a clausal head bearing an interpretable valued feature searches for a degree head bearing a matching unvalued feature in a lower part of the clause, and assign a value to that feature. The result is delayed-Merge of a degree or degree-like adverb with the DegP, and movements of adverb plus DegP to the left periphery position of a clause. This analysis captures all the major properties of degree adverbs: the sentential scope is marked by the clausal head; the locality constraints in (1,5) are a result of regular locality constraints between a probe and a goal in the Agree theory; the clause-type restrictions and co-occurrence restrictions with other functional heads noted in (2,6) can be accommodated by some universal functional hierarchy akin to those proposed in Cinque (1999). (7) illustrates the syntax of degree-like adverbs in exclamative sentences.

(8)




From here it is a short step to derive degree inversion (1b), the 'piggybacking' phenomenon (4), and the well-known indefiniteness constraint in exclamative sentences (e.g. What a/*the great book it is!). The first is required because moving DegP directly from the inside of a DP to the edge of a clausal projection would violate the *phase impenetrability condition*. The second is derived from the fact that independently-motivated QR renders the DegP local from the relevant clausal head. And the third is derived from the *specificity condition*, since the covert movement of DegP to the edge of the clause would cross the DP boundary.

In sum, I show that there is strong evidence that certain degree adverbs have syntactic dependencies with non-local clausal functional heads, and should best be analyzed as

focus-sensitive adverbs. The findings, if on the right track, further enrich the Agree theory and our understanding of the nature of focus-sensitivity.

**References: Abney, S.** The English noun phrase in its sentential aspect. **Borrof**, M. 2006. Degree phrase inversion in the scope of negation. **Bresnan**, J. 1975. Syntax of the Comparative Clause Construction in English. **Chomsky**, N. 2000. Minimalist Inquiries. **Cinque**, G. 1999. *Adverbs and functional heads*. **Corver, N.**1997. *Much*-support as a last resort. **Kennedy C & Merchant J**. 2000. Attributive Comparative Deletion. **McCawley, J.** The syntactic phenomenon of English. **Troseth, E.** 2009. Degree inversion and negative intensifier inversion in the English DP.

**A Compositional Approach to M-possessives: A view from Bangla**

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**Introduction** Bangla, like English, presents two types of possessives: **R(egular)-possessive,** in (1), and **M(odificational)-possessives**, in (2) (cf. Munn 1995).

(1) Ruma-r juto
Ruma-gen shoes
'Ruma's shoe' (def. or indef.)

(2) chele-de-r juto
boy-de-gen shoe
'men's shoe' (def. or indef.)

Both possessives have the semantic type of simple nouns in the language, i.e., they are predicates of type <e,t>, as they function as restrictors of quantifiers, occur in predicate position of copular sentences and receive an indefinite or a definite reading in argument position. However they differ significantly in their internal structure and interpretation.

This paper proposes that the distinctive property of M-possessives as opposed to R-possessives is that the relation M-possessives internally expresses (denoted by *-r*) holds generically between its two arguments; in R-possessives, on the other hand, it expresses an 'episodic' relation.

**The Proposal:** The non-head noun (the possessor) in R-possessives is a referential expression. This allows for a relatively straightforward compositional analysis. The genitive marker denotes a context dependent relation between individuals (see Partee 1983, and Barker 1995). This relation, combined with its individual argument (e.g. *Ruma*) results in the predicate true of individuals that are in that relation with Ruma. This predicate combines with the predicate denoted by the head noun (e.g. *shoe*) to form the complex predicate true of shoes that are in the contextually provided relation with Ruma. The formal details are below (c.f. Partee 1983):

(3) $[|r_1|]^g = g(1)_{<e,et>}$
(4) $[|\text{Ruma-r }|]^g = \lambda y.$ g(1) holds of Ruma and y
(5) $[|\text{Ruma-r juto}|]^g = \lambda y.$ y is a shoe and g(1) holds of Ruma and y

When g(1) is a possessive relation the interpretation is that of a predicate true of shoes that belong to Ruma (see Barker 1995).

Whereas for R-possessives a relatively standard analysis is available, a semantic approach to M-possessives presents two challenges. The first challenge is regarding local semantic compositionality: the overt argument of the genitive relation is not an individual denoting expression. The second challenge is the generic/modal like interpretation of these genitives: *chele-de-r juto* is a predicate true of shoes that MEN, rather than women or children, would wear/own etc. The proposal presented here addresses both these challenges.

**The Semantics of M-possessives:** First, we suggest that the non-head noun (e.g. *man/men*) is an indefinite bound by an existential closure which is inserted above the relation *-r*: For interpretability, this noun moves locally at LF and leaves a trace which functions as the variable restricted by the noun (see Heim 1982).

(6) $[\exists$ man $[\ 1\ [\ t_1$ r$]$ shoe$]]$ (Cf. Heim 1982)

Since the trace of the restricting predicate provides the first individual argument of the genitive relation, this assumption addresses the local compositionality problem.

Secondly, we suggest that the intuition that the relation in M-possessives holds 'generically' between its two arguments is due to the presence of a generic operator G in their structure, which is a modal/quasi universal operator quantifying over situations.

(7) [G $C_4$ [∃ man [ 1 [ $t_1$ r] shoe]

The restrictor C of the G-operator is a contextually provided set of situations (see discussion of *Mary smokes* in Krifka et al 1995).

Finally, in order to obtain an interpretable LF, the head noun *shoe* moves at LF for interpretability and its trace of type e is the second argument of –r. The resulting LF is shown below in (8):

(8) [shoe [3[ G $C_4$[∃ man [ 1 [ $t_1$ r] $t_3$]]]]

The interpretation of (2) is then obtained compositionally as follows.

(9) ‖ [∃ man[1[ $t_1$ r] $t_3$]]] ‖$^{g,s}$= 1 iff ∃x[x is a man in s and g(1) holds of x and g(3) in s]

(10) ‖[G $C_4$] [∃ man [1 [$t_1$ r] $t_3$]]]‖$^{g,s}$=1 iff G s' ∈ g(4) [∃x. x is a man in s' & g(1) holds of x and g(3) in s']

(11) ‖3[[G $C_4$] [∃ man [1[ $t_1$ r] $t_3$]]]]‖$^{g,s}$ = λy. G s' ∈ g(4) [∃x. x is a man in s' & g(1) holds of x and g(3) in s'].

(12) ‖ shoe [3[ [[G $C_4$] [∃ man [ 1 [ $t_1$ r] $t_3$]]]]] ‖$^{g,s}$ =
λy. y is a shoe in s & G s'□ g(4) [∃x. x is a man in s' and g(1) holds of x and g(3) in s']

If, for concreteness, we take the relation denoted by *–r* as one of possession (that is, g(1) = λx. λy. x owns y), then the predicate we obtain is one true of shoes that generically/typically are owned by a man, as desired.

**Further Evidence:** Our analysis of M-possessives is in terms of generically holding relations, and R-possessives in terms of episodically holding ones. Given this, constraints on these two readings observed elsewhere should apply to M-vs R- readings of the possessives as well. We notice in (13) and (14) that it is quite unnatural to embed an episodic statement under a generically quantified predicate, but the reverse embedding is perfectly natural. Therefore we expect that each *–r* in an embedding of genitives can convey a different relation if an M-possessive is embedded under an R-possessive, but not vice versa. This prediction is borne out in (15)-(16), where the multiple relation reading is available in (15), but crucially, (16) is unacceptable.

(13) */??Mary typically claims/believes that John smoked a cigarette yesterday.

(14) Mary knew that John usually smokes.

(15) Ruma-r chele-de-r juto
Ruma-gen boy-de-gen shoe
'men's shoe that belongs to Ruma'

(16) *chele-de-r Ruma-r juto
boy-de-gen Ruma-gen shoe

**Selected References:**

Barker, C. (1995). *Possessive descriptions*. CSLI Publications

Heim, I. (1982). The Semantics of Definite and Indefinite Noun Phrases. Ph.D. thesis, University of Massachusetts, Amherst

Heim, I and A. Kratzer. (1998). Semantics in Generative Grammar. Oxford: Blackwell

Krifka, M. et al. (1995). 'Genericity: An Introduction'. In Carlson and Pelletier (eds.)*The Generic Book*. University of Chicago Press

Munn, A. (1995). "The possessor that stayed close to home". In Proceedings of WECOL, volume 24, pages 181–195. Citeseer

Partee, B. (1983/97). Uniformity vs. versatility: The genitive, a case study. Appendix to Theo Janssen (1997), Compositionality, In *The Handbook of Logic and Language*, Johan van Benthem and Alice ter Meulen (eds.), 464–470. New York: Elsevier.

**There will always be number!**

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**The goal:** It is a well-attested fact that natural languages show a great deal of variation with respect to the properties of personal pronouns. While the morphological properties of pronominal features (i.e. person, number) have been explored to a great extent (cf. Greenberg 1963; Cysouw 2003; Harley and Ritter 2002, and others), and while the full range of possibilities for person and number has been sketched out providing insights as to the maximum set of features that a natural language could employ, (cf. Harley and Ritter 2002), the questions remain (i) is there a set of pronominal features that all languages *must* incorporate? and (ii) what kind of features would such a set contain? This naturally leads to the central goal of this inquiry, which is to determine the most minimal pronominal system possible on the basis of the hitherto documented facts. Ultimately the outcome of this inquiry provides the necessary empirical basis for the development of a coherent theory of the nature of linguistic knowledge underlying the wide range of morphological realizations of pronominal features that we find in natural languages.

**Previous claims:** The outcome of this inquiry has consequences for a range of other issues. For example, in the literature the questions pertaining to the most minimal pronominal system have been raised on several different occasions in which they are framed within the issue of whether or not the number feature is universally present in the systems of free pronouns. For instance, Everett (2005) claims that the pronominal inventory of Pirahã does not make number distinctions, challenging Greenberg's universal 42: 'All languages have pronominal categories involving at least three persons and two numbers' (Greenberg 1963:96). Furthermore, the 'no number' claim was (tacitly) assumed by Harley and Ritter for the development of a system which predicts languages that do not exhibit number features (2002:501–2). In contrast, the most minimal pronominal system has also been assumed to make the number distinctions *only* in the first person (Ingram 1978; Cysouw 2003). Thus, there are conflicting views as to the lower boundary on feature systems. In this paper we show that number *must* be within the lower boundary despite its morphological absence in some languages, confirming Greenberg's intuitions. The features of the most minimal pronominal system have also been tied to the morpho-syntactic realization of agreement features (cf. Koeneman and Zeijlstra, to ap- pear). Arguing for the strong version of the so-called *Rich Agreement Hypothesis* Koene- man and Zeijlstra claim that subject-verb agreement features are generated as a separate syntactic projection if and only if the agreement features in the verbal paradigm reflect at least those features found in the most minimal pronominal system. They argue that the subject-verb agreement projection is an instantiation of grammaticalized argument- hood, comparable to projections such as tense and aspect. Thus, the correctness of their proposal depends on what is the most minimal system, which for empirical reasons they take to be Greenberg's formulation.

**The Data:** In this paper we provide the results of a crosslinguistic survey which sought to determine the most minimal set of features that all languages must incorporate in their pronominal systems. The data are mostly drawn from 'Free Personal Pronoun System database' Smith 2013, an online database documenting free pronouns in 456 languages. The survey reveals two important observations. **First**, languages which lack person or number features in their paradigms of free pronouns systematically compensate for this by realizing the missing features in the agreement morphology, suggesting that the grammar *does* encode

the pronominal features that appear absent at first sight. For example, only verbs in languages like Winnebago in (1) and W¯ambule in (2) mark the person and number features that are missing in the free pronouns. **Second**, languages which have been reported to lack morphological number features in both free pronouns and agreement paradigms, such as Classical Chinese (cf. Norman 1988:120), implicitly specify the number feature by constraining particular pronouns to referents which have specified number. For instance, Classical Chinese has a set of singular pronouns which must be linked to singular referents. First person pronouns *yú, yuˇ, yí, zhèn* and the second person pronoun *ruˇ* cannot be linked to plural referents (Meisterernst 2012). This suggests that the singular-plural distinction must be present in the system, even though the language altogether lacks plural pronouns.

Importantly, the two observations come unexpectedly only for those theories which do *not* take number to be a part of the minimal set of pronominal features (e.g. Harley and Ritter 2002). Indeed, there are systems with extensive morphological gaps, e.g. lacking plural altogether. However, all languages that have been hitherto investigated include pronouns specified for a specifc number indicating that the implicit knowledge of other number features must be present, despite the fact that they are morphologically absent. **Analysis:** There are two ways of analyzing languages which exhibit particular pronom- inal features only on the verb, such as Winnebago and W¯ambule. (i) the pronominal features are spread out over multiple syntactic nodes, e.g. some of the ϕ–features sur- facing only in the 'impoverished' free pronouns (FP), while others only in the affix on the verb at I0, illustrated in (3). (ii) free pronouns are underlyingly specified for all three pronominal features [speaker], [participant] and [plural] but that some feature(s) are not phonologically realized, illustrated in (4). Unlike the analysis in (3) where all features are semantic (i.e. interpretable), in (4) the features on the verb are formal (i.e. uninterpretable), which are checked as a result of the subject-verb Agree operation.

The analysis in (4) is comparable to the standard *pro*-drop analysis in the sense that the semantic features of the subject are morphologically unrealized. However, unlike *pro*- drop, what we see in languages like W¯ambule is that only particular pronominal features (but not all) are dropped resulting in homophonous forms of pronouns for subjects of varying ϕ–feature specifications. What this suggests is that a *pro*-drop analysis in prin- ciple is able to account for the analysis in (4), without additional theoretical machinery. In contrast the split-semantics in (3) requires additional stipulations to account for the counter-intuitive nature of the semantic features of *one* pronominal argument realized on multiple syntactic nodes, making it less desirable.

(1) *Winnebago*

a. nee ha- šgác
1/2 1.SG- play
'I play'

b. nee ra- šgác
1/2 2.SG- play
'You play'

(2) *Wāmbule*

a. uṅgu hep i bi -l jā: -ø -me
1 cooked.grain your SOC -LOC eat -1.SG -RES
'I eat rice at your place'

b. Un im bī -l cāmdo pā -sī cāb -du -m
2 that SOC -LOC game do -INF can -2.SG -RES
'You.SG can play with that [boy].'

(3) $[_{IP}\ FP_{\left[\begin{smallmatrix}\text{speaker}\\ \text{particip.}\end{smallmatrix}\right]}\ [_{I'}\ I^0_{[\text{plural}]}\ [_{vP}\ \ldots]\ ]\ ]$

(4) $[_{IP}\ FP_{\left[\begin{smallmatrix}\text{speaker}\\ \text{particip.}\\ \sout{\text{plural}}\end{smallmatrix}\right]}\ [_{I'}\ I^0_{[\sout{u}\text{plural}]}\ [_{vP}\ \ldots]\ ]\ ]$

**References**: Cysouw, M. (2003). *The paradigmatic structure of person marking*. Oxford: Oxford University Press Oxford. ♦ Everett, D. (2005). Cultural constraints on grammar and cognition in Pirahã. *Current anthropology* 464:621–46. ♦ Greenberg, J. H. (1963). Some

universals of grammar with particular reference to the order of meaningful elements. *Universals of language* 2:73–113. ♦ Harley H. and Ritter, E. (2002). Person and number in pronouns: A feature-geometric analysis. *Language* 78:482–526. ♦ Ingram, D. (1978). Typology and universals of personal pronouns. *Universals of human language* 3:213–248. ♦ Koeneman, O. and Zeijlstra, H. (2014). One law for the rich and another for the poor: The rich agreement hypothesis rehabilitated. To appear in *Linguistic Inquiry*. ♦ Norman, J. (1988). *Chinese*. Cambridge: Cambridge University Press. ♦ Meisterernst, B. (2012). Number in Chinese: a diachronic study of Zhu¯ from Han to Wei Jin Nanbeichao. Plurality and Classifiers across Languages in China 255:143–182 ♦ Smith, N. (2013, December). *Free personal pronoun system database*. Retrieved from http://languagelink.let.uu.nl/fpps/index.php?mode=search.

**Pronominal Object-oriented Floating Quantifiers**

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Maling (1976) proposes that in addition to subject-oriented quantifiers ($FQ_{subj}$) there are also pronominal object-oriented floating quantifiers ($FQ_{obj}$) where the $FQ_{obj}$ occurs to the right of its DP associate (1).

(1) a. Harry gave $[_{DP}$ them$]_i$ all$_i$ some food to keep them quiet.
b. Harry found $[_{DP}$ them$]_i$ all$_i$ so dirty when he got back to the castle.

At first blush, the pronominal $FQ_{obj}$ seems to mirror the syntactic properties of $FQ_{subj}$, with respect to, for example, locality and case agreement. However, there are distributional asymmetries in the licensing of adjuncts and pronominal $FQ_{obj}$. Firstly, Maling (1976) notes that the $FQ_{obj}$ is restricted in its distribution - the pronominal $FQ_{obj}$ requires a constituent which is semantically related to the object DP (2).

(2) a. Harry turned them all $[_{PP}$ into toads].
b. *The generals went after them all $[_{PP}$ on elephants].

The PP in (2a) is semantically related to the pronominal object DP - i.e., intended meaning: "they were all turned into toads". Contrasting, in (2b), when the PP is semantically related to the subject DP - i.e., intended meaning: "the elves, who were on elephants" - the sentence is ungrammatical. However, such semantic restrictions are not imposed on the pronominal $FQ_{subj}$ (3).

(3) a. They have all argued with the generals $[_{PP}$ about war strategies].
b. They have all attacked the enemy $[_{PP}$ on elephants].

Furthermore, in the case of the pronominal object DP, an $FQ_{obj}$ is licensed in sentence-final position, a banned position in constructions with a full nominal object DP (4).

(4) a. *Harry saw the boys all.
b. Harry saw them all.

On the basis of the asymmetries in the presented data, I claim that a pronominal $FQ_{subj}$ and a pronominal $FQ_{obj}$ should not be treated as the same phenomenon. Thus, in this paper, I propose a re-analysis of the current data - a separate analysis for $FQ_{obj}$ with a pronominal DP. Further, Maling (1976: 711) notes that under contrastive stress, the pronoun undergoes varying degrees of vowel reduction. Building on her observation, I propose, contrary to the empirical data proposed in the current literature, that a distinction needs to be made between (a) the strong pronouns which can be stressed and focused, and (b) the pronouns that undergo vowel reduction. Specifically, I propose that the $FQ_{obj}$ only occurs with the phonologically reduced pronoun, i..e, the pronominal clitic, like *'im, 'er* and *'em* (5) and not with full pronouns which allow for contrastive stress, i.e., strong pronouns, like *him, her* or *them* (6).

(5) a. Harry saw 'em all. Simple object
b. Harry gave 'em all to the boys. Prepositional object
c. Harry gave 'em all the rings. Double object

(6) a. *Harry saw [$_{QP}$ them all]. Simple object
b. *Harry gave [$_{QP}$ them all] to the boys. Prepositional object
c. *Harry gave [$_{QP}$ them all] the cookies. Double object

To account for the data in (5) and (6), I propose that the $FQ_{obj}$ seen in (5) is a result of clitic climbing and has the following base-generated underlying form (7):

(7) [$_{QP}$ [$_{Q}$ all [$_{PP}$ (of) 'em]]

The structure in (7) shows that the clitic '*em* is base-generated in the QP and it receives case from the phonologically null P. As the quantifier cannot host the pronominal clitic, the pronominal clitic climbs up the structure to find the next available host, which is the lexical verb and thus leaving the quantifier *all* behind in the structure. The clitic is prevented from climbing higher than the lexical verb because in English, functional structures like the auxiliary verb, cannot host a pronominal clitic (c.f. "*It is them all that Harry saw*" vs. "**It is'em all that Harry saw*") As for the sentences in (6), the strong pronoun *them* is base-generated in the QP. As extraction out of the non-floating QP is banned, it is not possible to have the pronoun move out of the QP.

Under this clitic-climbing analysis, there is a possibility of overgeneration where the ungrammatical sentence in (8c) is predicted:

(8) a. Harry saw 'em all.
b. Harry saw 'em all there.
c. *Harry saw 'em there all.

The sentence in (8c) can be accounted for by an update of Sportiche's (1996) Merge in Spine (MiS) analysis – quantifiers are merged in the position they are stranded - with Bošković's (2004) independent observation – quantifiers cannot be floated in argument positions. Thus by the MiS analysis, (8c) violates both the conditions stated: (a) *'em all* is in the argument position thus quantifier floating is banned, and (b) if the quantifier is to be floated, *'em all* needs to be merged to the right of *there* which is not a licensed argument position for the QP and the sentence "*Harry saw there 'em all"* is ungrammatical.

Thus, in this paper, with evidence from simple object, prepositional object, double object constructions, as well as discontinuous sentence constructions - topicalization, extraposition and wh-constructions - I will show that in English, what seems to be an $FQ_{obj}$ with a pronominal object DP, more specifically a pronominal clitic object DP, is actually a result of clitic climbing.

**Bibliography**

Aarts, B. (1992). *Small Clauses in English: The Nonverbal Types*. Berlin: Walter de Gruyter.
Bošković, Ź. (2004). Be careful where you float your quantifiers. *Natural Language and Linguistic Theory,* 22, 681-742.
Maling, J.M. (1976). Notes on Quantifier-Postposing. *Linguistic Inquiry, 7,* 708-718.
Postal, P. (1974). *On Raising: One Rule of English and its Theoretical Implications.* Cambridge, MA: MIT Press.
Sportiche, D. (1996). Clitic Construction. In J.Rooyck & L/Zaring (Ed.). *Phrase Structure and the Lexicon* (pp. 213-276). Dordrecht: Kluwer.

**Copy Theory of Movement and the Syntax of Relative Clauses**

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This paper proposes a unified head-raising account for four different types of relative clauses (RCs) in Tagalog, bringing it to bear on the syntax of RCs in English and Japanese. Couched in terms of the copy theory of movement, the different positions of the head noun are suggest-ed to be due to its different copies being pronounced, explaining straightforwardly why all four types of RCs are subject to the same constraint and why the clause-internal head noun occurs in the same positions as those of the absolutive/subject argument in the declaratives.

Superficially Tagalog has four different types of RCs: head-initial, head-medial, head-final and headless RCs (the head noun is underlined):

(1) a. guro-ng d<um>ating kahapon. (head-initial RC)
teacher-LK <AP.PERF>arrive yesterday
'Teacher who arrived yesterday.'

b. d<um>ating na guro kahapon. (head-medial RC)
<AP.PERF>arrive LK teacher yesterday
'Teacher who arrived yesterday.'

c. d<um>ating kahapon na guro. (head-final RC)
<AP.PERF>arrive yesterday LK teacher
'Teacher who arrived yesterday.'

d. d<um>ating kahapon. (headless RC)
<AP.PERF>arrive yesterday
'One who arrived yesterday.'

All four types are all subject to the general **absolutive/subject-only constraint** on extraction according to which the relativized argument must be the absolutive/subject argument of the predicate (Schachter and Otanes 1972).

This fact can be accounted for by the head-raising analysis of RCs (Vergnaud 1974, Kayne 1994) in which the head noun is raised from argument position to SpecCP. Movement to a preverbal position is susceptible to the same general constraint to which other cases of syntactic movement are also subject, e.g., the *ay*-inversion construction:

(2) a. ang doktor$_i$ ay nakita ng governador $t_i$.
ABS doctor AY AP.PERF.see ERG governor
'It's the doctor that the governor saw.'

b. *ng governador$_i$ ay nakita $t_i$ ang doktor.
ERG governor AY AP.PERF.see ABS doctor
'It's the governor that saw the doctor.'

(3) a. doktor$_i$ na nakita ng governador $t_i$.
doctor LK AP.PERF.see ERG governor
'Doctor that the governor saw.'

b. *governador$_i$ na nakita $t_i$ ang doktor.
governor LK AP.PERF.see ABS doctor
'Governor that saw the doctor.'

Long-distance relativization, too, is constrained in the same way as other cases of long-distance A-bar-movement. The clause from which extraction takes place must itself be

the ab-solutive/subject argument of the matrix predicate (Kroeger 1993, Schachter 1993, Sells 2000).

According to the copy theory of movement, the raised head noun leaves a copy in the position from which it raises. The head-initial RC can be derived by deleting the lower copy, the head-medial RC by deleting the upper copy, and the headless RC by deleting both copies. The head-final RC is a special case of the head-medial one, for its position is just one of those in which the post-verbal absolutive/subject argument in the declaratives can occur:

(4) a. [$_{DP}$ D [$_{CP}$ [$_{TP}$ arrived teacher yesterday ]]] (underlying structure)
b. [$_{DP}$ D [$_{CP}$ teacher [$_{TP}$ arrived ~~teacher~~ yesterday ]]] (head-initial RC)
c. [$_{DP}$ D [$_{CP}$ ~~teacher~~ [$_{TP}$ arrived teacher yesterday ]]] (head-medial RC)
d. [$_{DP}$ D [$_{CP}$ ~~teacher~~ [$_{TP}$ arrived yesterday teacher ]]] (head-final RC)
e. [$_{DP}$ D [$_{CP}$ ~~teacher~~ [$_{TP}$ arrived ~~teacher~~ yesterday ]]] (headless RC)

On this view, the postverbal positions of the head noun necessarily co-incide with those of the absolutive/subject argument in the declaratives.

(5) a. s<in>abi ni Fred [ na b<in>ili (ang libro) ni Maria (ang libro) ]
<PERF>say ERG LK <PERF>buy ABS book ERG LK ABS book
'Fred said that Maria bought the book.'
b. s<in>abi ni Fred [ na b<in>ili (na libro) ni Maria (na libro) ]
<PERF>say ERG LK <PERF>buy LK book ERG LK LK book
'Book that Fred said that Maria bought.'

(6) a. *s<in>abi ang libro ni Fred [ na b<in>ili ni Maria ]
<PERF>say ABS book ERG LK <PERF>buy ERG
'Fred said that Maria bought the book.'
b. *s<in>abi na libro ni Fred [ na b<in>ili ni Maria ]
<PERF>say LK book ERG LK <PERF>buy ERG
'Book that Fred said that Maria bought.'

Our account can explain certain examples of the internally headed RCs better than the remnant movement of TP proposed by Aldridge (2004). The order in which the head noun appears between the predicate and an ergative argument cannot be derived by remnant TP fronting. This is because the ergative argument cannot be moved out of the TP before the remnant TP is fronted.

(7) a. gusto ko ang b<in>ili-ng libro ng guro.
like 1S ABS <PERF>buy-LK book ERG teacher
'I like the book that the teacher bought.'
b. [$_{DP}$ [$_{TP}$ bought $t_i$ $t_j$ ]$_k$ [ D [$_{CP}$ book$_i$ [ teacher$_j$ $t_k$ ]]]

Typologically, headed RCs are most appropriately described as being of just two types: externally headed or internally headed RCs, instead of three: head-initial, head-medial or head-final RCs. In principle, a head-final RC can either be an externally headed RC or a variant of an internally headed one. A question of some typological significance is to what extent the analysis of RCs in Tagalog offered here is applicable to other languages. English has no internally headed RCs, and Japanese arguably has more than one type of internally headed ones, according as their interpretive properties (Kitagawa 2004). We nonetheless claim that RCs in English are derived in the same way as in Tagalog. The lack of internally headed RCs in English is due to it generally not having the option of deleting the upper copy

of a displaced phrase; it is always the highest copy that is pronounced. Tagalog differs from English in that except for cases of focus any copy left behind by movement may be pronounced. This can be observed in the relatively free word-order of postverbal constituents, a result of different copies being pronounced.

Different types of internally headed RCs in Japanese (Shimoyama 1999, Murasugi 2000, Kitagawa 2004 among others) clearly cannot be given a unified analysis. However, insofar as some of these are subject to island contraints (Watanabe 2004) and reconstruction effects (Ishi 1991), they can be given the same head-raising analysis as RCs in Tagalog. The clause-internal head in Japanese, too, is the pronunciation of the lower copy of the raised head, and may appear in the same positions in the clause as those of the arguments in the declaratives.

**Nominal Right Node Raising Constructions in Chinese**

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**Introduction** This paper investigates the nominal Right Node Raising (RNR) construction in Chinese and its theoretical implications on the syntax-semantics of inner/outer topics and empty objects. It is argued that the null objects in Chinese, although having a wider range of interpretative possibilities, are nevertheless constrained by syntax and semantic well-formedness conditions. The nominal RNR sentences represent crucial examples that illustrate how syntax-semantic conditions may restrict the available readings of null objects.

**Observation** Sentences with apparent coordinated APs in English can have two readings:

(1) a. John saw black and white pandas.
'John saw pandas that are black and white.' [mixed reading]
b. John saw black and white poodles.
'John saw black poodles and white poodles.' [split reading]

The corresponding Chinese sentences show that these two readings are syntactically different:

(2) a. Lisi kanjian [heise gen baise]-de xiongmao
Lisi see black and white-DE panda 'as in (1a)'
b. Lisi kanjian [heise]-de gen [baise]-de guibingou.
Lisi see black-DE and white-DE poodle 'as in (1b)'

Crucially, the split reading requires the presence of the modificational marker *de* in both conjuncts. The structure of (2b) is further complicated by the fact that the 'shared' element following the conjunct can be a structurally complicated DP:

(3) Lisi kanjian [heise]-de gen [baise]-de [$_{DP}$ na liang zhi gou].
Lisi see black-DE and white-DE that two Cl dog
'Lisi saw the two dogs, one of which is black and the other is white.'

Note that the shared DP cannot be fully reconstructed into either conjunct, which indicates that the structure for (3) does not involve backward NP/DP-deletion, as in (4), or a rightward ATB-movement, as in (5), since both types of analyses will wrongly predict that the shared element would be fully reconstructed into the conjuncts, yielding a wrong reading where there are four dogs in total, two of which are black and the other two are white:

(4) Lisi saw [black-DE ~~those two dogs~~] and [white-DE those two dogs]
(5) Lisi saw [[black-DE $t_i$] and [white-DE $t_i$] [those two dogs]$_i$].

Li (2013) argues that the occurrence of *de* may license an empty noun in Chinese. As a consequence, the coordinated elements in (3) should both contain an empty noun after the modificational marker *de*.' The correct structure of (3) thus resembles a type of Right Node Raising (RNR) constructions in the nominal domain.

**Proposal** To derive the correct interpretation of (3), I suggest that the RNR constructions in the nominal domain should be analyzed as in (6):

(6) [$_{FocP}$ ___ [$_{InTopP}$ na liang zhi gou [$_{VP}$ kanjian[$_{ConjP}$ [heise-de $N_e$] gen [baise-de $N_e$]]]]]]
that two Cl dog see black-DE and white-DE

Two major properties of (6) are: (i) the shared element is base-generated as an inner topic, which subsequently triggers VP-focalization, and yields the surface word order in (3), and (ii) both conjuncts contain an empty noun, which are licensed by *de*. For the analysis of inner topic, I follow Cecchetto (1999) in assuming that the right dislocated NP/DP is base-generated in the inner topic position (InTopP) immediately above VP, and then the inner topic phrase triggers VP-fronting to a preceding focus position. For the latter, I assume that the null elements following *de* in each conjunct are empty nouns, in line with Panagiotidis's (2003) empty noun and Li's (2005 et seq.) True Empty Category. Different from the standard empty categories, i.e., traces, PRO and *pro*, the empty nouns in (6) may only contain categorical features, such as [+N] and lack any lexical/substantive content. Panagiotidis (2003) and Li (2005 et seq.) both argue that interpretation of the empty nouns is supplied through LF-copying, and therefore, they allow a wider range of interpretative possibilities. Specifically, an empty noun may combine with a null D, and yield indefinite and definite readings as shown in (7):

(7) Zhangsan xihuan yi ge nuhai, Lisi ye xihuan [$N_e$].
Zhangsan like one Cl girl Lisi also like
a. Zhangsan likes a girl, and Lisi also likes one.' ([$_{DP[-def.]}$ [$_{NP}$ $N_e$]]: a girl)
b. Zhangsan likes a girl, and Lisi also likes her.' ([$_{DP[+def.]}$ [$_{NP}$ $N_e$]]: the girl)

Back to the nominal RNR construction, I argue that the empty object has the specific structure as (8a), and the LF of (6) is (8b), where NP-reconstruction is applied on each empty noun:

(8) a. $N_e$ = [$_{NP}$ *e* ]
b. [$_{InTopP}$ na liang zhi gou [$_{VP}$ kanjian[$_{ConjP}$ [heise-de [$N_{e\ =gou}$]] gen [baise-de [$N_{e\ =gou}$]]]]]
that two Cl dog see black-DE and white-DE

Note that in (b), full DP-reconstruction cannot apply due to the fact that full DP-reconstruction will give rise to a contradictory reading where each conjunct contains two dogs (four dogs in total), but the topic only mentions two dogs.

**Implication** A crucial new assumption proposed in this paper is that the shared element in (6) is an 'inner' topic, which is different from a typical outer CP-level topic. The differences between the two types of topics are directly reflected on their LF properties. Specifically, an interpretative asymmetry is found between the 'outer' topic position and the 'inner' topic position. The shared element (*na liang tai che*) in (9a) sits in the inner topic position, whereas the shared element in (9b) is located in the outer topic:

(9) a. Lisi mai-le heise-de gen hongse-de, na liang tai che.
Lisi bought black-DE and red-DE that two Cl car
'Lisi bought those two cars, a black one and a red one.'
b. ?*Na liang tai che, Lisi mai-le heise-de gen hongse-de.
that two Cl car Lisi bought black-DE and red-DE

I propose that the difference between inner and outer topics is in their semantic functions:

(10) Given the structure [$X_{Topic}$…$a_{vb}$...$b_{vb}$], where X is a topic, and a, b are variables bound by X:

(i) Inner Topic is an identity function, where X = a + b
(ii) Outer Topic is an inclusion function, where $X \supseteq \{A \in a, B \in b\}$ (see Chao 1968)

While (10a) is a novel proposal, (10b) is typically observed in Chinese topicalization, where the outer topic is a superset of the associated element, as in (11a); however, such superset relation is not observed in the inner topic, as in (11b), where the inner topic must be identical to the associated element:

(11) a Yu, Zhangsan xihuan chi huang-yu (fish $\supseteq$ yellow fish)
fish, Zhangsan like eat yellow-fish
'As for fish, Zhangsan likes to eat yellow fish.'
b. *Zhangsan xihuan chi huang-yu, yu. (fish $\neq$ yellow fish)

The difference between the inner and outer topics thus allows us to capture the interpretative asymmetry observed in (9). NP-reconstruction of (9b) results in an interpretation that 'those two cars' is a superset of 'red and black cars,' which is not true: $^{\#}X(\text{those two cars}) \supseteq \{\text{red cars, black cars}\}$, yet NP-reconstruction of (9a) is felicitous: X(those two cars) = red car + black car.

**Number Agreement, Concord, and Feature Licensing in the Hindi DP/ NP**

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I. In Hindi, attributive adjectives (and the genitive case morpheme) inflect for plural number if N is masculine pl. (1b), but not if N is feminine pl. (2b). (Hindi has grammatical gender.)

| | | | | |
|---|---|---|---|---|
| 1a. | laRkee | k **-aa** | acch**-aa** | kutt**aa** |
| | boy | gen.**-m.sg.** | good-**m.sg.** | dog.**m.sg.** |
| | 'The boy's good dog' | | | |
| 1b. | laRkee | k **-ee** | acch**-ee** | kutt**ee** |
| | boy | gen.**-m.pl.** | good-**m.pl.** | dog.**m.pl.** |
| | 'The boy's good dogs' | | | |
| 2. a. | laRkee | k **-ii** | acch**-ii** | ããkh **Ø** |
| | boy | gen.**-f.sg.** | good- **f.sg.** | eye.**f.sg.** |
| | 'The boy's good eye' | | | |
| 2b. | laRkee | k **-ii** | acch **-ii** | ããkh**ẽẽ** |
| | boy | gen.**-f.sg.** | good- **f.sg.** | eye. **f.pl** |
| | 'The boy's good eyes' | | | |

Predicative adjectives (however) inflect for plural when N is feminine plural (3). (Nasalization on the Adjective is a reflex of plural agreement, seen also on the Verb.) So (2b) cannot be explained as the absence of number in the agreement paradigm for feminine adjectives.

| | | | | | | |
|---|---|---|---|---|---|---|
| 3. | [laRkee | k **-ii** | ããkh**ẽẽ**] | [acch **-ĩĩ** | h**ɛ̃**] | |
| | boy | gen.**-f.sg** | eye.**f.pl.** | good-**f.pl.** | be.**pl** | |
| | 'The boy's eyes are good.' | | | | | |

If we take predicate agreement in (3) to arise from Agree, and (2b) to be DP-internal Concord, this is substantive evidence for the Agree-Concord distinction made by Deal 2011, Giusti 2011, *contra* Baker 2008, Carstens 2000. More interestingly, the Agree-Concord distinction of (2b-3) obtains *within* the DP. The Demonstrative agrees with N's number without referencing N's gender. (2b) contrasts with (4) (a nominative DP) and (5) (an oblique DP). (Dem has separate nominative/ oblique forms, but does not manifest Gender.)

| | | | | | |
|---|---|---|---|---|---|
| 4. | **yee** | doo | kutt**ee** | /ããkh**ẽẽ** | [nominative DP] |
| | dem. prox.**pl**. **nom**. | two | dog.**m.pl**. **nom**. | /eye.**f**.**pl**. **nom**. | |
| | 'these two dogs; these two eyes' | | | | |
| 5. | **in** | doo | kutt**õõ** | /ããkh**õõ** koo/ | [oblique DP] |
| | dem. prox.**pl**. **obl.** | two | dog.**m.pl**.**obl**. | /eye.**f.pl**.**obl**. **acc./dat.** | |
| | 'to/ from these two dogs; to/from these two eyes' | | | | |

The DP-internal Agree/Concord contrast is unexpected on Deal's assumption that Concord features are "bundled together in one morpheme … (that) appears in multiple places within DP" (following Norris 2011, who collects features diverse in origin – Case from outside DP, gender from N, Number from N or NumP – under a single K node for concord). Agree and Concord domains in the DP may correspond to its "reference" and "referent" domains (Cinque 2010, Giusti 2011). Concord occurs in the referent domain NP or nP for the lexically

specified Gender feature; Agree occurs in the reference domains DP/KP and IP for syntactic features Number and Case. I assume that NumP in the DP, with interpretable Number, is the source of number marking on Dem, predicative A and V. The referent-reference distinction explains why adjectives show concord but adverbs do not (Deal 2011): adverbs modify the event, i.e. the reference of the predicate, and not its referent, as adjectives do.

II. If Number is a NumP feature and Concord a spread of N's lexical features to its modifiers, what triggers the apparent Number Concord in (1a-b)? Is *-ee* a lexical plural feature, available to only masc. N? An immediate problem is that in oblique contexts, the *-ee* marked N is interpreted as masc. *singular* (cf. 6); the *-aa* marked N is unavailable. Traditionally, (6) is taken to show that N has distinct 'direct' and 'oblique' stem forms (cf. Blake 2001:10). This makes two facts accidental: (i) only masc. N have 'oblique' forms; (ii) the oblique stem is the same 'vocabulary item' as the masculine pl. Thus if N belongs to a lexical subclass with plural spelt out as Ø (*bandar* 'monkey/s'), the oblique stem is also Ø. It nevertheless triggers *-ee* concord:

6. meer-**ee** kaal **-ee** kutt- **ee/** bandar- **Ø** koo / see / nee
   my-*ee* black *-ee* dog-*ee* obl.sg./ monkey- Ø oblique case
   'To/ from/ by my black dog; to/ from/ by my black monkey'

(7) shows that *-ee* Concord persists in the oblique plural DP (7), creating a mismatch with N marked *õõ* for obl. pl. There is no *õõ* concord. This argues that N here merges in its '*-ee* form,' Concord occurs with N immediately after modifier merge, and Concord is spelt out prior to valuation of N for Number at NumP, reinforcing the argument for a 'low' Concord domain.

7. meer-**ee** kaal **-ee** kutt- **õõ** / bandar**- õõ** koo / see / nee
   my-*ee* black *-ee* dog-**obl.pl**. / monkey **obl.pl**. oblique case
   'To/ from/ by my black dogs; to/ from/ by my black monkeys'

N-*ee* has (in addition to 'masc.pl.' (1b) and 'masc.sg.oblique' (6) readings), a third reading as just 'oblique.' 'Verbal nouns,' nonfinite forms that end in *-aa*, inflect for-*ee* in oblique contexts, triggering concord: *usk**aa** gaan**aa*** 'his singing,' *usk**ee** gaan**ee** see* 'from his/ her singing.'

III. I therefore analyze *-ee* as a formal N feature [ff]. Take all lexical [ff] to need syntactic licensing for interpretation. Let N have a hierarchy of [ff]s (perhaps mirroring Harley and Ritter's(1998) feature geometry of phi-features in nominal expressions). Let 'masc.' *-aa* be [ff1] (recall that Gender is formal in Hindi), 'fem.' *-ii* [-ff1], and *-ee* be [ff2], dependent on [ff1].

Why do only N-*ee* and N-*ii* occur in oblique DP, while nom. DP allow any of the three N forms? N with a nominative Case feature first merges into Gender and a defective Number head $Num_{def}$. $Num_{def}$ does not add features, but values existing N features and makes them available to NumP through N-Num movement. In oblique DP, there is no $Num_{def}$. Under the DM assumptions of syntactic under-specification and vocabulary insertion of the most fully specified non distinct item, there is default insertion of [N, ff1, ff2] in (6-7) if the Gender head is [ff1] and $Num_{def}$ absent. This feature set spreads to the modifiers. Its default spell out *-ee* is *-ee* concord regardless whether *-ee* is spelt out on N. In (6), a vocabulary rule of Ø plural applies to N *bandar* 'monkey.' In (7), N must raise to Number to get its number (and further on, to get Case). This N-Number-Case complex head is spelt out as *N*-**õõ** if [pl] is assigned. If not (or if Number is irrelevant and so absent), [N, ff1, ff2] is spelt out and interpreted

respectively as [-plural] or 'oblique.'

Empirically, the spell out of [plural] in nominative DP respects gender and lexical class: *lark-**ee,** bandar-* ***Ø*** vs**.** *ããnkh-**ẽẽ,** laRkiy-**ãã***. In contrast, the spell out ***õõ*** of [plural] in oblique DP neutralizes gender and lexical class. On the suggested analysis, N's 'gender' is not passed on to NumP in oblique DP, in the absence of a $Num_{def}$ head. Notice also that [pl] on N in NumP is spelt out as a nasal vowel. The nasality feature inheres at NumP, but the vowel does not: it is always a copy. In feminine nominative DP, it is a copy of the spell out of an N feature (hence the vowels *-ee* in *ããnkh-**ẽẽ,** -aa* in *laRkiy-**ãã***). In all oblique DP, the copy is of a K (Case) feature spell out: accusative/ dative Case is spelt out ***-oo***, obl.pl. is ***õõ.*** This is further evidence that in obl. DP, there is no $Num_{def}$ to pass on N's features to NumP.

***Select references*** Baker 2008 *The syntax of agreement and concord*; Cinque 2010 *The syntax of adjectives*; Deal 2011 'Agreement and Concord' *http://isites.harvard.edu/fs/docs*; Giusti 2011 'On Concord and Projection' *Bucharest Working Papers in Linguistics 103-124*; Norris 2011 'Towards an analysis of concord (in Icelandic)' *http://www.lingref.com/cpp/wccfl/29/paper2704.pdf*

**Decomposing Coordination: the Two Meaning Components of Coordination**

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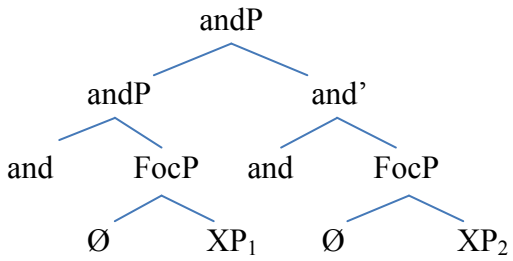
In this paper I argue that coordination is actually made up of two meaning components; and that these meaning components are represented by two distinct functional heads in the syntactic structure of coordination.

In any instance of coordination, the most obvious function of the coordinator is concatenation (linear sequencing): '(and) A, and B, and C, …'. Haspelmath (1997:10) observes that in many languages the conjunction construction is diachronically related to the comitative construction, 'A with B'; we can take this provenance of conjunction as corresponding to the concatenation meaning of coordination. But Haspelmath also notes that a second diachronic source of the conjunction construction is an additive focus particle, 'A, also B'. This fact points in a different direction: each coordinand bears a certain degree of focus.

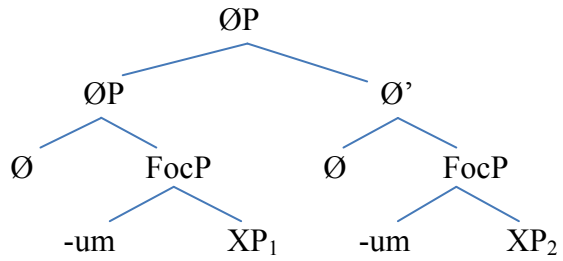
Now, focus requires an operator to interpret the focused constituents. This implies that in any sentence containing coordination, there is a conjunction or disjunction operator. Cf. Rooth (1985:16): "the meaning of the feature F[ocus] in LF is … that a semantic object with variables in the positions of focused phrases is available." We can take it that the interpretation of coordination involves the serial substitution of the entities denoted by the coordinands for a variable in an open sentence. The 'job' of the operator is to do this substitution. The operator must be generated in a position where it has all the coordinands in its c-command domain; this can be either the left periphery of vP, or of CP.

The claim of this paper is that the two meaning components of coordination – namely, concatenation and focus – are represented by two distinct functional heads in the syntax of coordination. A ground of parametric difference appears to be that languages realize either one of these heads but not both. English *and*/*or*, I suggest, is a realization of the concatenation head; the same appears to be true of Hindi *aur*/*yaa*. By contrast, the Dravidian coordination markers – e.g. Malayalam *-um* for conjunction, and *-oo* for disjunction – are markers of focus, and the concatenation head has no lexical realization. The structures that we assume for English and Malayalam coordination are the following:

(3) a. <u>English</u>




b. <u>Malayalam</u>




In English the head of FocP is null, but the head of the concatenation phrase is expressed; in Malayalam (conversely) the head of FocP is expressed, but the head of the concatenation phrase is null.

To substantiate the immediately preceding observations: Note that English *and*/*or* are merely coordination markers and have no operator-like function; whereas the Malayalam *-um* /*-oo*, although they superficially function as coordination markers (1), are primarily conjunction/disjunction operators (2):

(1) *-um*/*-oo* as coordination markers:

a. John-um, Bill-um, Peter-um wannu
John-CONJ Bill-CONJ Peter-CONJ come.PAST
'John, Bill, and Peter came.'

b. John-oo, Bill-oo, Peter-oo wannu
John-DISJ Bill-DISJ Peter-DISJ come.PAST
'John, Bill, or Peter came.'

(2) *-um*/*-oo* as coordination operators:

a. aarə entə coodicc-aal-um, awan koDukk-um
who what ask-COND-CONJ he give-FUT
'Whoever asks for whatever (thing), he will give (it).'

b. aar-uDe wiiTT-il-oo, kaLLan kaDannu
who-GEN house-LOC-DISJ thief enter.PAST
'A thief entered somebody's house.'

c. Mary wannu-oo ?
Mary come.PAST-DISJ
'Did Mary come?'

In (2a), *-um* as an operator applies to the two *wh*-phrases in its scope and interprets them as universal quantifiers; in (2b), *-oo* applies to the *wh*-phrase in its scope and interprets it as an existential quantifier; and in (2c), *-oo*, generated in C, functions as the question particle that turns the sentence into a question. (In fact, any *wh*-word in Malayalam, when suffixed with *-um*/*-oo*, becomes a quantifier. We may assume that the *wh*-word's variable is interpreted by *-um*/*-oo* as infinite conjunction/disjunction, which is how coordination enters into the picture here.)

We may assume that the coordination markers of (1) are copies of the coordination operators that interpret them, which accounts for their homophony. We may also assume that a coordination operator is 'silent' (not phonologically realized) when its copies are present on the coordinands; which would account for why, in the sentences of (1), the coordination operator that interprets the coordinands – which we claim is present in Spec,vP or Spec,CP – is 'hidden.' (See also Winter 1998, Szabolcsi 2013 for the 'silent operator' idea.)

Japanese is an interesting case: it has two conjunction markers, *to* and *mo*, and a disjunction marker *ka*:

(4) a. John to Mary to
'John and Mary'

b. John mo Mary mo
'John and Mary'

c. John ka Mary ka
'John or Mary'

*To* is homophonous with a particle that means 'with' (Kasai & Takahashi 2001), which we can take to indicate that it is the concatenation head. It never functions as an operator. But *mo* and *ka* we shall analyse as focus heads, for they are homophonous with conjunction/ disjunction operators that interpret wh-words in their scope as universal/existential quantifiers:

(5) (Nishigauchi 1990)

a. Dare-mo ga nani-ka o tabe-te-iru
who-CONJ NOM what-DISJ ACC eating-be
'Everyone is eating something.'

b. Dare ga ki-te mo, boku-wa aw-a-nai
who NOM come CONJ I-TOP meet-not
'Whoever may come, I will not meet (him).'

Conclusion: An important puzzle about coordination markers in languages, namely that some of them are plain coordination markers whereas others appear to be both coordination markers and operators, is explained by our 'two heads' analysis.

Selected References:

Haspelmath, M. (1997) "Coordination," in T. Shopen, ed., *Language Typology and Syntactic Description*, vol. 2, CUP.

Kasai, H., and S. Takahashi (2001) "Coordination in Japanese," in MIT Working Papers in Linguistics 41, MITWPL, Cambridge, MA.

Nishigauchi, T. (1990) *Quantification in the Theory of Grammar*, Kluwer.

Szabolcsi, A. (2013) "Quantifier particles and compositionality," in *Proceedings of the 19th Amsterdam Colloquium*.

# Transportation

**1. Taxi**

If you want to get to Taiwan Taoyuan International Airport (about NT$1,500) or Hsinchu Railway Station (about NT$150) by taxi, please call (03)551-6000 or 55688. Or, you may ask any student helper to make a reservation for you.

**2. Intercity/Highway Express Bus**

You may take an intercity/highway express bus to get to Taipei (70 minute ride; about NT$100-140). Please refer to the map on p. 186 for the intercity/highway express bus stops.

| Departure time from Hsinchu | Departure time from Taipei |
|---|---|
| **Hsinchu Bus** | |
| First run:<br>05:20 (weekday);<br>05:30 (weekend)<br>Last run: 22:30 | First run:<br>05:20 (weekday);<br>05:40 (weekend)<br>Last run: 23:20 |
| **Kuokuang Bus** | |
| First run: 05:20<br>Last run: 22:30 | First run: 06:00<br>Last run: 23:00 |
| **Howtai Bus** | |
| First run:<br>05:45 (weekday);<br>06:00 (weekend)<br>Last run: 00:30 | First run: 06:00<br>Last run: 01:00 |

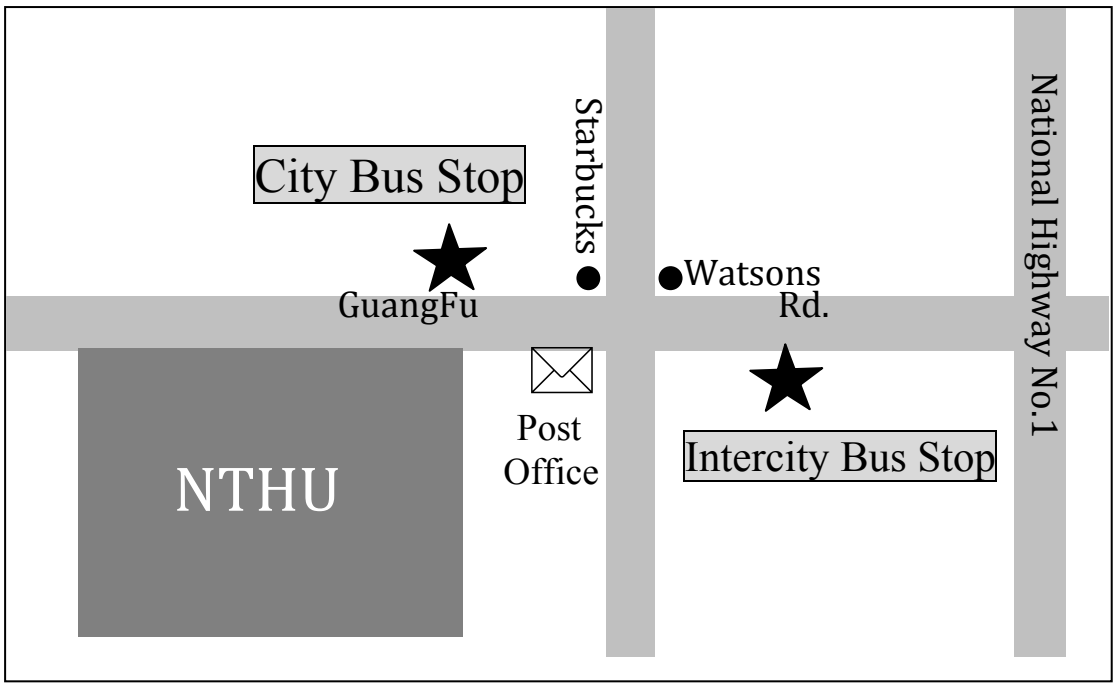
**3. Shuttle bus to Academia Sinica (AS)**

You can also take a shuttle bus at the main gate of NTHU to AS.

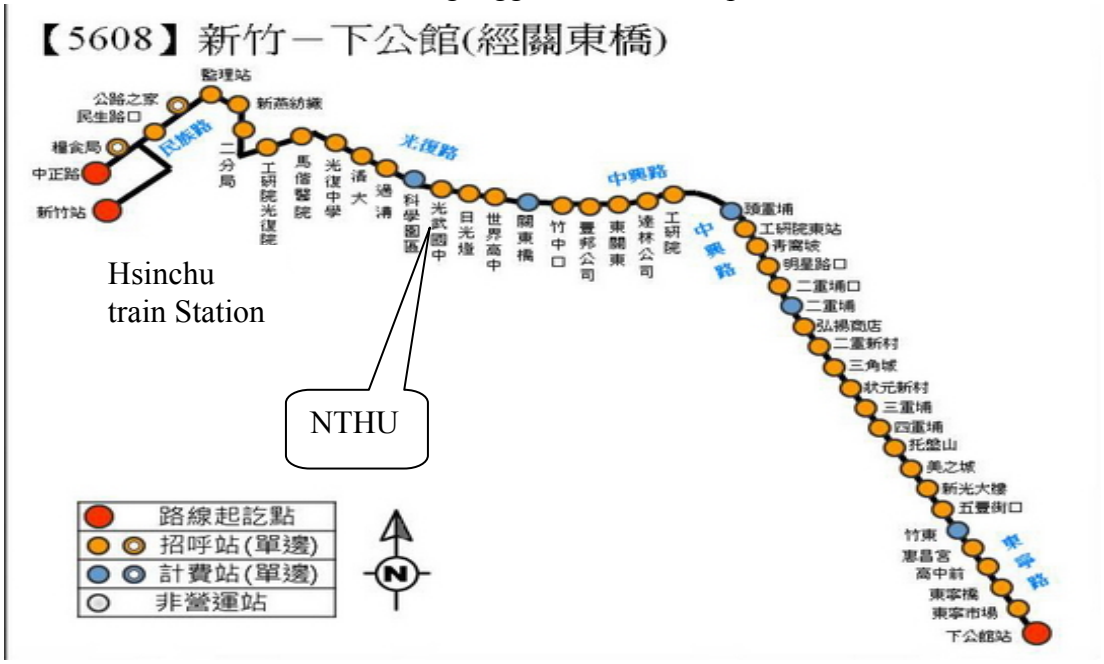
| Date | AS →NCU→NTHU | NTHU→NCU→ AS |
|---|---|---|
| Monday | 06:50→07:50→08:40 | 12:20→13:00→14:00 |
| Monday | 10:30→11:30→12:15 | 18:30→ nonstop →19:50 |
| Wednesday | 06:50→07:50→08:40 | 07:00→07:40→08:40 |
| Wednesday | 10:30→11:30→12:15 | 11:00→11:40→12:40 |
| Wednesday | — | 12:20→13:00→14:00 |
| Wednesday | 17:00→18:00→19:00 | 19:00→ nonstop →20:20 |
| Friday | 06:50→07:50→08:40 | 12:20→13:00→14:00 |
| Friday | 10:30→11:30→12:15 | 18:30→ nonstop →19:50 |

**4. City Bus**

If you want to go to Hsinchu Railway Station by bus, please take **City Bus 5608** (about NT$15) or **City Bus Route 1** (about NT15). Refer to ★ on the map on p. 186 for the city bus stop. Please get off at the terminal stop.




- 〔Hsinchu train station－Xiagongguan〕Route map

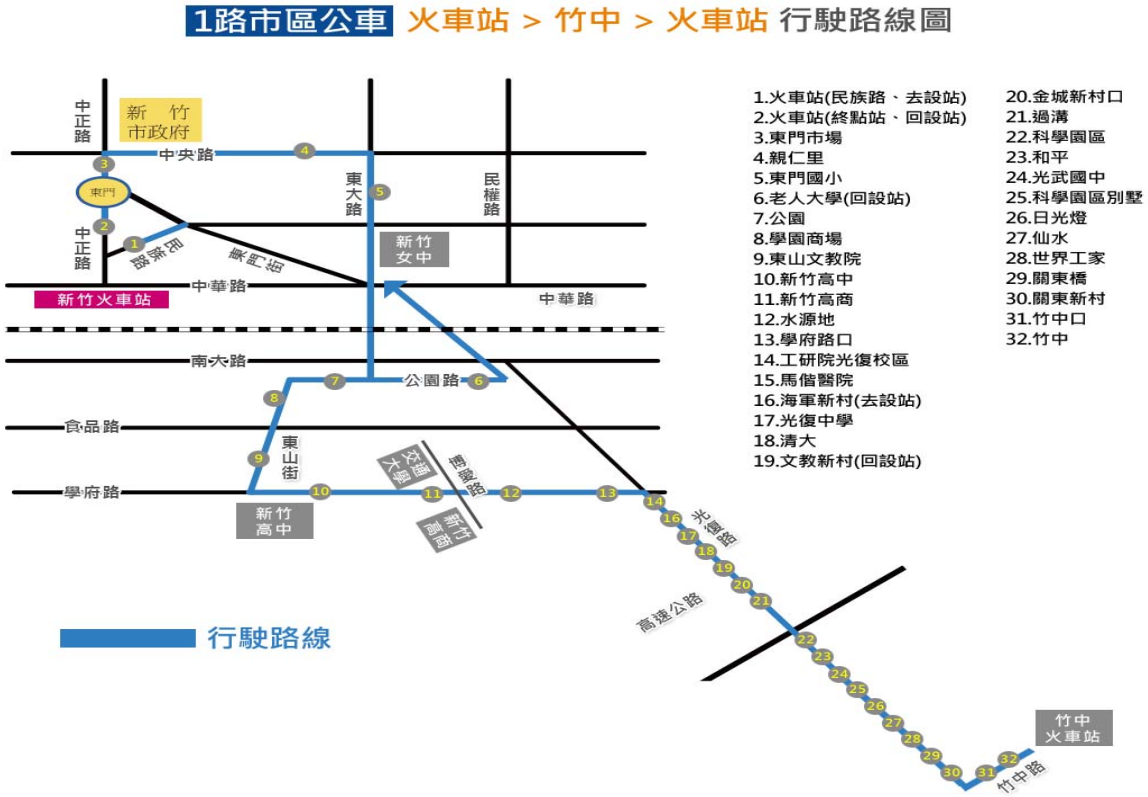



- 〔Hsinchu train station－Xiagongguan〕Timetable

| 5608【Hsinchu –Xiagongguan】timetable（weekday） | |
|---|---|
| Depart from Hsinchu train station | Depart from Xiagongguan |
| First run 06:00～Last run 22:45<br>one run per 10-20 minutes | First run 05:20～Last run 22:00<br>one run per 10-20 minutes |

| 5608【Hsinchu – Xiagongguan】timetable（weekend） | |
|---|---|
| Depart from Hsinchu train station | Depart from Xiagongguan |
| First run 06:15～Last run 22:45<br>one run per 10-20 minutes | First run 05:30～Last run 22:00<br>one run per 10-20 minutes |

- 〔Hsinchu train station－ZhuZhong〕Route map




- 〔Hsinchu train station－ZhuZhong〕Timetable

| Route 1【Hsinchu –ZhuZhong】timetable（weekday） |
|---|
| Depart from Hsinchu train station |
| First run 05:40～Last run 22:15<br>one run per 10-20 minutes |

| Route 1【Hsinchu –ZhuZhong】timetable（weekend） |
|---|
| Depart from Hsinchu train station |
| First run 05:50～Last run 22:15<br>one run per 10-20 minutes |

# Practical Information

**★ATM**

1. **Post Office:**
   a) Post Office (at the east gate)
   b Administration Building (No. 10 in NTHU campus map, Page 6 )
2. **Mega International Commercial Bank (兆豐銀行) :**
   a) Administration Building (No. 10 in NTHU campus map, Page 6)
   b Shui Mu Student Center ( 2F; No. 34 in NTHU campus map, Page 6)

**★ Convenience stores**

1. **7-11:** Food Court (No. 31 in NTHU campus map, Page 6)
2. **Family Mart:** Feng Yun Building (No. 35 in NTHU campus map, Page 6)
3. **Grocery store:** Shui Mu Student Center (1F; No. 34 in NTHU campus map, Page 6)

**★ Cafeterias / Food Venders**

1. **Food Court** (No. 31 in NTHU campus map, Page 6)
2. **Feng Yun Building** (1-3F; No. 35 in NTHU campus map, Page 6)
3. **Shui Mu Student Center** (1F; No. 34 in NTHU campus map, Page 6)

**★ Bookstore:** **Shui Mu Student Center**
(1F; No. 34 in NTHU campus map, Page 6)

# Off-campus Dining

★Cafes: Starbucks (8), 老咖 COSTTA CAFE (23)
★Restaurants:
-Chinese food: 鬍鬚張(2), 小洞天(13), 吳記蔥蔬餅(18), 肥仔龍(20), 銅鑼灣(21), 大埔鐵板燒(25), 醍醐味(26), 餃子大王(28), 麵朝(31), 晶圓排骨飯(32), 日荃蒸餃(34), 榮茂魯肉飯(35)
-Western food: Subway (30), 吉米洋食義大利麵(12)
-Japanese food: 甘泉魚麵(1), 十六區(4), Mos Burger (5), 京都豚骨拉麵(19), 江之戶(27)
-Vegetarian: 棗子樹(33)
★Bakeries: 新龍興蛋糕(3), Victoria(16)
★Chinese Breakfast Stores: 來來豆漿(14), 永和豆漿(15)
★Desserts: 立晉豆花(17)
★Drugstores: Watsons (9), Cosmed (24)
★Convenient Stores: 7-Eleven (10, 22, 29)
★Photocopying Services: 名揚影印(6), 玖偵影印(7)
★Bookstores: 大學書局(11)

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|---|---|---|
| Head | Wei-Cheng Hsu 許韋晟 | |
| Members | Xin-xian Yu 余信賢 | Tzu-Ling Chen 陳姿伶 |
| | Kuan-I Shen 沈寬怡 | Hsiang-yin Chen 陳香吟 |
| | Tsai-li Pei 貝彩麗 | Wei-Shan Chen 陳葦珊 |
| | Tsung-tse Lin 林宗澤 | Wen-Huei Chang 張文慧 |
| | Xien-yi Lin 林嫻一 | Hui-Wen Huang 黃惠汶 |
| | HongSui Lim 林鴻瑞 | Hui-Wen Cheng 鄭惠文 |
| | Chao-Kai Shi 施朝凱 | Bo-Rong Zheng 鄭柏榮 |
| | Hui-Yu Ma 馬惠妤 | Ching-chun Hsiao 蕭景浚 |
| | Shu-Yun Liang 梁書云 | Chia-hao Tai 戴佳豪 |
| | Meng-Hsuan Chen 陳孟瑄 | Ho-Yun Hsieh 謝和耘 |
| | Wei-rong Chen 陳威戎 | Li-ying Li 李俐盈 |
| | Yu-hsien Kuo 郭育賢 | Chui-Yi Lee 李翠兒 |
| | Huang Xinjunrong 黃新駿蓉 | Kat Cheong Lee 李吉祥 |
| | Jih-Ho Cha 查日穌 | Po-Yao Hung 洪舶堯 |

**Transportation:**

| | | |
|---|---|---|
| Head | Ting Huang黃婷 | |
| Members | Seng-hian Lau 劉承賢 | Xien-yi Lin 林嫻一 |
| | Chi-Yen Wang 王棋彥 | Chen Tzu-Ling 陳姿伶 |
| | Chia-Chi Yu 余家綺 | Meng-Hsuan Chen 陳孟瑄 |
| | Tsung-Hsien Li 李宗憲 | Yi-An Chen 陳薏安 |
| | Chui-Yi Lee 李翠兒 | Jou Tsui 崔柔 |

**Food Service:**

| | | |
|---|---|---|
| Head | Ching-ting Chuang 莊淨婷 | |
| Members | Yu-sheng Wang 王俞升 | Kai-yun Ou 歐愷云 |
| | Miao-Yu Hung 洪妙育 | Wei-Cheng Cheng 鄭偉成 |
| | Yi-cheng Chen 陳以承 | You-tzu Yen 顏佑慈 |

**Account Affairs：**

| | |
|---|---|
| Head | Yao-wei Chiang 蔣燿煒 |
| Members | Hui-Wen Huang 黃惠汶 |