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優選詞彙映照理論與英語漢語論旨角色與語法功能之連結

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摘要

此一研究計畫檢視詞彙功能語法(LFG)中的詞彙映照理論(LMT)，從一致性與精簡的角度出發，發展出一優選詞彙映照理論；接著以此分析漢語中多項述詞的論旨結構類型、詞彙映照、及功能轉換，並且從語法互動的角度對功能轉換(function-changing)的結構提出解釋。

優選理論在音韻研究上已是主流之理論趨勢，但在句法研究上的應用卻仍屬起步階段，且多以詞組結構與詞序為主；國內目前亦尚無 OT 之語法研究。次項研究計畫以作者研究之互動理論及簡化詞彙映照理論 (Lexical Mapping Theory, LMT) 為基礎，以優選理論 (Optimality Theory, OT) 詮釋語法互動及 LMT，將論旨結構 (a-structure) 與語法功能 (lexical form) 之映照原則轉化為有優選排序之映照限制 (constraints)，進而發展出一完整之優選詞彙映照理論 (OT-LMT)，並以其對英語漢語中之多種語法功能轉換現象之分析，驗證此一理論之合理性及普遍性。根據簡化 LMT 之單一映照原則初步發展出以下 OT 限制，於 {a-structure, lexical form} 之 candidate set 選取 optimal output。以下 R 指 role，F 指 function。

(1) Argument-Function Mapping Constraints

CompFun(R, F): Given an a-structure argument R, $\langle \cdot R \cdot \rangle$,

R is linked to a compatible argument function F

LinkFun(F, R): Given an argument function F in lexical form,

$\langle \cdot F \cdot \rangle$, F is linked to an argument R in a-structure

UniqFun(F_a, F_b): Given any two argument functions F_a and

F_b in lexical form, $\langle \cdot F_a \cdot F_b \cdot \rangle$, F_a ≠ F_b

PromFun(R, F): Given an a-structure argument R, $\langle \cdot R \cdot \rangle$,

R is linked to most prominent function F

AlignFun(F_a, F_b): Given any two adjacent argument functions

F_a and F_b in lexical form, $\langle \cdot F_a F_b \cdot \rangle$, F_a is not less prominent than F_b

CompFun/LinkFun/UniqFun >> **AlignFun** >> **PromFun**

此一優選系統應用於英語漢語之處所詞倒置結構及結果式結構。將簡化 LMT 的整體 (包括普遍的語法特徵派分及各語言中的詞態語法律) 全面以 OT 詮釋，完成 OT-LMT；目的二在於將以此 OT-LMT 分析漢語之詞彙映照，並以此驗證理論。

關鍵詞：優選理論、詞彙功能語法、詞彙映照、論旨結構、語法功能、功能轉換

Abstract

The Optimality Theory (OT) has become the dominant trend in phonological research, while its application in syntactic research is still in its infancy and mostly centers around the study of phrase structures and word order. Thus far, there has not been any syntactic study in the Optimality-Theoretic paradigm. This research project, based on this researcher's previous work on the simplified lexical mapping theory (LMT), aims to interpret the linking between a-structures and lexical forms in terms of ranked OT constraints and to further validate its aptness and universality in analyzing the function-changing constructions in English and Chinese. The goal is to develop an OT-LMT. Her (2002c), based on the simplified LMT, has tentatively proposed a set of ranked OT constraints to account for the single mapping principle. An optimal output is selected from the set of the candidate set of {a-structure, lexical form} pairs. R refers to 'role' and F to 'function'.

(1) Argument-Function Mapping Constraints

CompFun(R, F): Given an a-structure argument R, <..R..>,

R is linked to a compatible argument function F

LinkFun(F, R): Given an argument function F in lexical form,

<..F..>, F is linked to an argument R in a-structure

UniqFun(F_a, F_b): Given any two argument functions F_a and

F_b in lexical form, <.. F_a..F_b..>, F_a ≠ F_b

PromFun(R, F): Given an a-structure argument R, <..R..>,

R is linked to most prominent function F

AlignFun(F_a, F_b): Given any two adjacent argument functions

F_a and F_b in lexical form, <.. F_a F_b..>, F_a is not less prominent than F_b

CompFun/LinkFun/UniqFun >> **AlignFun** >> **PromFun**

This OT system has been applied to locative inversion constructions and the resultative constructions in English and Chinese. The primary goal of this project is to convert the simplified LMT entirely into OT constraints, including the universal assignment of syntactic features to argument roles and morpho-lexical and morpho-syntactic operations. The second goal is to fully re-analyze lexical mapping in English and Chinese within the newly-developed OT-LMT; doing so also further validate the aptness and universality of OT-LMT. This project thus can also serve as a good model where findings in theoretical linguistics are put into practical application.

Keywords: OT, Optimality Theory, LFG, LMT, lexical mapping, argument structure, grammatical functions, function-changing

報告內容

研究目的

The goal of this project is to convert the simplified LMT entirely into OT constraints, including the universal assignment of syntactic features to argument roles and morpho-lexical and morpho-syntactic operations. The goal is also to fully re-analyze lexical mapping in English and Chinese within the newly-developed OT-LMT; doing so also further validate the aptness and universality of OT-LMT.

文獻探討

The mapping principles for role to function correspondence and the well-formed conditions on lexical forms are rendered as OT-style constraints in Bresnan (2000:353-4).

(2) A- to F-structure Mapping Constraints

HarmonicAlignArg(**HAA**): The most prominent a-structure argument corresponds to the most prominent (least oblique) syntactic argument function

HarmonicAlignAff(**HAF**): The most affected a-structure argument corresponds to the most prominent syntactic argument function

*HarmonicAlignArg(***HAA**): Arguments correspond to the least prominent syntactic argument function

Completeness(**Complete**): Every a-structure argument corresponds to a syntactic argument function

Coherence(**Coherent**): Every syntactic argument function corresponds to an a-structure argument

Given that all arguments in a-structure are underspecified, with one syntactic feature only, mapping to grammatical functions must always be checked. There is no discussion on the ranking among these constraints in Bresnan (2000). However, given that both Complete and Coherent are inviolable, they must outrank all the others. HAA, which applies specifically to $\hat{\theta}$, should outrank HAF, which in turn outranks *HAA, an *elsewhere* constraint.

(35) Ranking of A- to F-structure Mapping Constraints

Complete/Coherent >> HAA >> HAF >> *HAA

Note that the subject condition is no longer necessary, given HAA and HAF, both of which prefer the most prominent function, SUBJ. However, this set of constraints does not seem to be complete in two respects. First, compatibility between underspecified arguments and functions is not made explicit. Secondly, argument-function biuniqueness is not incorporated: HAA and HAF can map two roles in a-structure to the same function, for example, <ag[-o] th[-r]> to <SUBJ SUBJ>, and likewise *HAA in principle allows the mapping of two or more roles to the same function.

研究方法

I first present the theory of a-structure and the mapping from a-structure to syntactic functions as they are generally conceived in the literature in general and in Bresnan (2001) in particular. I then present a simplified LMT and briefly discuss the motivations of the revisions proposed. A single unified mapping principle comprehensively and consistently constrains the syntactic assignment of all roles to all functions. I illustrate how the unified mapping principle can be translated into OT terms and how varied ranking accounts for typological variation.

結果與討論

Locative inversion as a morphosyntactic operation that supplements syntactic features for role-to-function assignment is rendered as an OT constraint on mapping in general. The single unified mapping principle Furthermore, this principle is re-interpreted as a set of OT constraints. These universal mapping constraints, some violable, are universally ranked in relation to one another. Feature-annotated a-structures are assumed to be the input and {a-structure, lexical form} pairs are assumed to form the candidate set. The output, or the optimal selection, is the pair that has no violation or the least violations. The OT interpretation of mapping constraints accounts for all the data presented and also offers a possible explanation for the (un)markedness of the inverted and uninverted syntactic forms.

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計畫成果自評

In terms of the advancement of the lexical mapping theory, we moved towards an OT-LMT as part of UG. What has been achieved in data analysis is also significant, though the project's original proposal was more ambitious. The two versions of OT-LMT are still being evaluated: the one quoted above and the following:

(3) Optimality-Theoretic Argument-Function Mapping Constraints

a. A-structure Well-formedness Constraints

UniqRol: Given R_n and R_m in the n^{th} and m^{th} position in a-structure respectively and $n \neq m$, $R_n \neq R_m$

DescendRol: Given R_n and R_{n+1} in the n^{th} and $(n+1)^{\text{th}}$ position in a-structure respectively, R_n is more prominent than R_{n+1} on the Thematic Hierarchy (8)

b. Lexical Form Well-formedness Constraints

UniqFun: Given F_n and F_m in the n^{th} and m^{th} position in lexical form respectively and $n \neq m$, $F_n \neq F_m$

DescendFun: Given F_n and F_{n+1} in the n^{th} and $(n+1)^{\text{th}}$ position in lexical form respectively, F_n is more prominent than F_{n+1} on the Markedness Hierarchy of GFs (9)

c. Argument-Function Linking Constraints

AlignRolFun: Given R_n and F_n in the n^{th} position in a-structure and lexical form respectively, R_n is linked to F_n , and only F_n

AlignFunRol: Given F_n and R_n in the n^{th} position in lexical form and a-structure respectively, F_n is linked to R_n , and only R_n

LinkPriPt: Given R in a-structure, where R is the primary *pt/th* or the only *pt/th*⁵, R is linked to an unrestricted (*-r*) F in lexical form

LinkSecPt: Given R_n and R_m in a-structure, where R_n = primary *pt/th* and R_m = secondary *pt/th*, R_m is linked to an objective (*+o*) F in lexical form

LinkResFun: Given R in a-structure, where $R \neq \hat{\theta}$ or *pt/th*, R is linked to a restricted (*+r*) F in lexical form

PromFun: Given R in a-structure, R is linked to an unmarked (*-r -o*) F in lexical form

(4) OT Ranking of Argument-Function Mapping Constraints

UniqRol/DescendRol/UniqFun/AlignRolFun/AlignFunRol

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LinkPriPt/LinkSecPt

>>

*(Language-specific morphosyntactic constraints)*⁹

>>

LinkResFun

>>

DescendFun

>>

PromFun

The latter replaces the original Theory of the A-structure as well as the Mapping Principles. Tests are ongoing to find out which is simpler and more applicable to languages. Data from Formosan languages, which pose serious problems for the classical LMT, are included to test the OT-LMT. Initial results are promising.