

INTER-TIER CORRESPONDENCE THEORY

by

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A dissertation submitted to
the Graduate School – New Brunswick
Rutgers, the State University of New Jersey
in partial fulfillment of the requirements

for the degree of

Doctor of Philosophy

Graduate Program in Linguistics

written under the direction of

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New Brunswick, New Jersey

May 2004

ABSTRACT OF THE DISSERTATION

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Inter-tier Correspondence Theory (ICT) is a theory of candidate structure. It is a response to phenomena in which both opaque and transparent derivational effects are simultaneously attested. The response that ICT provides rests upon the recognition that structural configurations are crucial in triggering alternations in the first place.

By appealing to percolation, ICT assumes that each phonological output candidate is in fact a structural representation where non-terminal nodes reconstruct the information content of the constituent nodes. However, reconstruction may be imperfect. That outputs are structural is hardly novel, since GEN generates structures to given strings. Instead, it is the carriage of information in non-terminal nodes that is noteworthy. Under ICT, terminal nodes would be identical to the input string. Alternations no longer apply to strings but to constituencies as elements of the input string percolate upwards in their constituent structures. This is an important improvement because it directly addresses the fact that mere adjacency does not trigger alternation (many marked collocations are tolerated if the offending sequence are not within the same constituent). To be precise, GEN takes an input string and maps it to candidate structures of various percolative possibilities with the terminal nodes identical to the input string and non-terminal nodes corresponding to their subordinates in a multitude of ways. Thus, ICT directly captures the insights of the containment and correspondence approaches within optimality theory. There is nothing derivational about percolation when construed as correspondence

between tiers. In fact, ICT views structural tiers as one would a multi-layered club sandwich. In making the sandwich, layers are ordered, but in eating, it hardly matters.

The usefulness of ICT is illustrated through a study of tonological alternation patterns in Mandarin and Tianjin. These languages illustrate that simultaneous exhibition of any of “feeding”, “bleeding”, “counterfeeding” and “counterbleeding” effects, are really results of alternations applying to constituents as they grow in size (in other words, upward percolation).

This dissertation studies Mandarin and Tianjin in detail, but ICT extends beyond that. To qualify ICT as a general theory for opacity, this work also takes glimpses at English, Tiberian Hebrew and Yokuts.

DEDICATION AND ACKNOWLEDGEMENTS

This dissertation is dedicated
to my parents and;
to Wong Chuen Shya (Michelle), who
for 10 years, sweetened every bitter moment of my life.

In the writing of this dissertation, I am most grateful to Akinbiyi Akinlabi. I do not think I can ever find enough courage or ability to write this dissertation if not for him. In this respect, I am also grateful to Alan Prince and Young-mee Cho who are equally indispensable as my dissertation committee members. To Matthew Chen, I owe not only inspiration, but also invaluable support and teachings. Without him, I would have neither material to write nor resources (specifically the grants from Strategic Research Grant Project No. 7000900 and Competitive Earmarked Research Grant Project No. 9040554 at the City University of Hong Kong) to live on in the final years of my graduate education. There is also the Tan Kah Kee Foundation for awarding me with the Tan Kan Kee Postgraduate Scholarship (1998). I aspire to be like my benefactors in their erudition, wisdom and kindness.

Back in 1999, Mark Baker and Hubert Truckenbrodt helped me shape the ideas presented in this work. On field work and traditional Chinese linguistics, I am indebted to Yan Xiuhong and Lu Jilun for generously sharing their ideas. Xiuhong supplemented my education on Chinese linguistics immensely. I also have Xiuhong and Liang Yuan to thank for patiently reading my drafts. Their hawk-vision greatly reduced my typographical errors. Whatever such errors that remain are entirely their fault.

I will never forget that when I first arrived in Rutgers, Joanna Stoehr saved my life by sharing her lunch with me. She didn't know it then, but I hadn't eaten for 50 hours. Carolyn Burger and the Rutgers Language Institute gave me jobs that relieved me of

much hardship that plague the typical graduate student. Ed & Abby Prince gave me my first transport in New Jersey – a bicycle which was of immense importance given my fear of driving a car. Abby’s mother, affectionately known to all as Mama, taught me how to make forgotten cookies and other recipes that enlivened my boring meals. It’s amazing how many life-savers one gets to meet when one goes to graduate school.

Cecilia Lo ensured my survival and wellbeing when I was in Hong Kong. She was my housekeeper, my secretary, my accountant, my medical care provider. I must have done something really good in all my previous incarnations to deserve all the love she has shown me. My cousin, Wong Sing, patiently taught me to paint while Jess Tsang shared with me his expertise in fine wines. These were my escapades when linguistic problems bedeviled my sleep. For a healthier balance in life in New Jersey, I owe thanks to Andre Nündel, Markus Hiller & his saxophone, Jason Yeung, Kwok Bong Fung, Eunice Pang, Mr. & Mrs. Ken Zee and the entire staff at the Noodle Gourmet. Though I have no family in the USA, I never felt alone and helpless because Mr. & Mrs. Zee made me much like their nephew. Close to my heart is Eunice, for being such a fresh gale when the Earth seemed to stop spinning. Without them, I would have found little meaning in writing this dissertation.

Finally, I would never have known linguistics if not for Tham Shiao Wei. And I would not have pursued it if not for my friends and teachers like K.P. Mohanan, Tara Mohanan and Alex Alsina at the National University of Singapore (1994-98). From them, I imbibed intellectual restlessness.

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TABLE OF TERMS AND DEFINITIONS

INTER-TIER CORRESPONDENCE THEORETIC TERMS:

Intermediate node	Any node on a tree that is not a terminal node or a root node is an intermediate node.
Inter-tier effective constraint	A constraint that applies at every tier of a tree is an inter-tier effective constraint.
Non-terminal node	Any node on a tree that is not a terminal node. This includes the root node and intermediate nodes.
Root node	The highest node of a tree. For every well-defined tree, there can be only one root node.
Root-effective constraint	A constraint that only applies at the root node of a tree is a root-effective (only) constraint.
Terminal node	The lowest node of a tree. There can be more than one terminal node.
Tier	Two nodes are in the same tier if they are dominated by the same number of branching nodes.

DERIVATIONAL PRINCIPLES:

Direction Flip By default rules apply from left to right (in Tianjin) – unless such a
Condition mode of application produces an ill-formed output (i.e. contains an environment where dissimilation rules can apply), in which case the direction of operation is reversed. (Chen 2000)

Moving Window Ditonal sandhi may not apply to the same local window more than once. (Chen, Yan and Wee 2003)

No Backtracking Do not backtrack. (Chen 2000)

One Step Principle Only base tones undergo change in the course of a derivation. (Hsu 2002)

Preemptive Clause When a string simultaneously contains an environment for dissimilation and for absorption, apply dissimilation first. (Chen 2000)

OT CONSTRAINTS:

ALIGN LT Align prosodic constituents left.

ALIGN RT Align prosodic constituents right.

ALIGN HD LT	The head of a prosodic word is aligned at the left edge of a prosodic word.
ALIGN HD RT	The head of a prosodic word is aligned at the right edge of a prosodic word.
ALIGN-XP, L	For each XP, there is a P (phonological phrase) such that the left edge of the XP coincides with the left edge of P. (Selkirk 1995)
ALIGN-XP, R	For each XP, there is a P such that the right edge of the XP coincides with the right edge of P. (Selkirk 1995)
BINARY	Non terminal nodes are binary branching.
CT COND	Across tiers, if a tone T does not share a boundary with another tone, T must have an identical correspondent.
INTF	If node A immediately dominates node B, then B must have an identical correspondent in A.
INTF-FT	If node A immediately dominates node B, then the foot structure of B must correspond to that in A.
INTF-HD	If node A immediately dominates node B and B is the head constituent, then B must have an identical correspondent in A.

NON FINAL	Word-final syllables are not footed.
NON-RECURSIVITY	Any two P (phonological phrases) that are not disjoint in extension are identical in extension.
OCP	Adjacent identical elements are forbidden. (abbr. for Obligatory Contour Principle)
OCP[TC]	No adjacent identical tone contours, written also as OCP[H], OCP[L], OCP[R] or OCP[F] depending on the tone (contour) in question.
OCP[TF]	No adjacent identical tone features, written also as OCP[x.x].
OCP[x.x]	See OCP[TF]
OCP[xy.y]	See OCP [TF]
WF-A	This is a special version of OCP[TF] which includes only OCP[xy.y]. (abbr. for Wellformedness-Absorption).
WF-D	This is a subset of OCP[TC], which includes OCP[R], OCP[F] and OCP[L] while excluding OCP[H]. (abbr. for Wellformedness-Dissimilation).

WRAP-IP Each IP (Infl Phrase) is contained in a P (Phonological Phrase).

WRAP-XP Each XP (Maximal projection of a lexical category) is contained in a P. (Truckenbrodt 1999)

In this work, all examples are numbered following this convention: (A.B.C-x) where A indicates the chapter number; B the section number; C the subsection number and; x the example number.

