INTER-TIER CORRESPONDENCE THEORY

by

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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.

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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 Condition	By default rules apply from left to right (in Tianjin) – unless such a 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.