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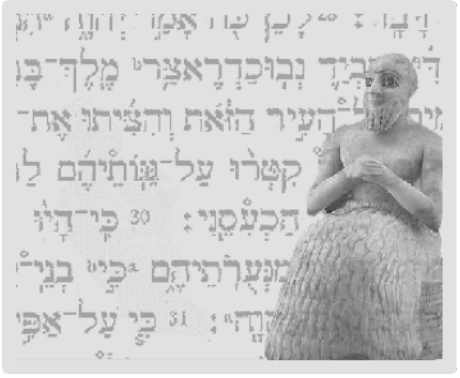

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OPTIMALITY IN THE "GRAMMARS" OF ANCIENT TRANSLATIONS

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1. INTRODUCTION

Researchers analyzing the techniques employed by the ancient translators of the Hebrew Bible have developed a remarkably sophisticated range of theory, methods, and terminology to capture, analyze, and describe their findings.[1] The burgeoning number of studies in the translation technique of the Targumists, the Septuagintal translators, and others testifies to the increasing attention devoted to this subject; in turn, this increased focus has pointed to the importance of the ancient versions in early endeavors to interpret the biblical text. Yet, the proliferation of studies elucidating the various techniques of these early translators has come with a cost: the thickness of the proffered descriptions and the notational systems (if any) used to convey them vary from researcher to researcher, and do not lend themselves easily to systematic collection and cross-corporal comparison.[2] There is no easy way to iden-

[1] Included in this category are works such as T.A.W. van der Louw, *Transformations in the Septuagint: Towards an Interaction of Septuagint Studies and Translation Studies* (CBET, 47; Leuven: Peeters, 2007); A. Aejmelaeus, *On the Trail of the Septuagint Translators: Collected Essays* (CBET, 50; Leuven: Peeters, 2007), esp. 205–39; C. Boyd-Taylor, *Reading Between the Lines: The Interlinear Paradigm for Septuagint Studies* (BTS, 8; Leuven: Peeters, 2011); A. Pietersma, *A Question of Methodology: Collected Essays on the Septuagint* (BTS, 14: Leuven: Peeters, 2013); J.R. Wagner, *Reading the Sealed Book: Old Greek Isaiah and the Problem of Septuagint Hermeneutics* (FAT, 88; Tübingen: Mohr Siebeck, 2013); and the essays in, e.g., M.K.H. Peters (ed.), *XIV Congress of the International Organization for Septuagint and Cognate Studies: Helsinki, 2010* (SBLSCS, 59; Atlanta: SBL, 2013). This list is hardly exhaustive.

[2] For the importance of "describing" translation technique, see, e.g., Aejmelaeus, *On the Trail*, 212. The difference in descriptive endeavors can be seen for example in a comparison of van der Louw, *Transformations in the Septuagint*, with Boyd-Taylor, *Reading between the Lines*. Although both offer "thick description" of the translators' techniques, the form of the descriptions can take significantly different shape, making comparison of the results challenging.

tify tendencies commonly held by translators working in different cultures, translating into different languages.

This paper proposes a solution to this difficulty through a three-part process: First, I provide a basic overview of Descriptive Translation Studies, including discussion of the field's primary emphases, significant methodologies, and relevant findings. This overview surveys and evaluates the work of Gideon Toury, a predominant expositor of Descriptive Translation Studies, in order to place the study on firm theoretical ground. Second, I provide a similar overview of Optimality Theory, a sub-field of linguistics that, I will argue, has special pertinence for Descriptive Translation Studies. Although Optimality Theory has not been entirely well-received in the broader field of theoretical linguistics, I will show that the theory and formalisms of Optimality Theory may be used to capture and organize the translation descriptions provided through Descriptive Translation Studies. The notational system employed by practitioners of Optimality Theory allows us to formalize observations in a straightforward manner, capturing anomalies in translation and subordinating translation norms to universally-valid principles. As I will show, the principles of Optimality Theory have already been anticipated—albeit not explicitly as such—in Septuagintal studies by Cameron Boyd-Taylor. His monograph, *Reading between the Lines*, adumbrates a number of the same principles employed and given more formal expression here. Finally, I will apply the theoretical insights and formalisms from Descriptive Translation Studies and Optimality Theory to an ancient translation: namely, *Tg. Jon.* of 2 Sam 11:1.

A single biblical verse is an exceptionally small sample for analysis. Before any of the conclusions arrived at below could be accepted as anything more than extremely provisional, it would be necessary to run the analysis against a much larger sample in monograph form. My hope, however, is that this paper will serve as a brief demonstration of the proposed theoretical application, and that it will gesture toward a number of plausible translation norms that are broadly valid. These broadly valid norms, which have been identified by descriptivists as "translation universals" obtaining across both modern and ancient translations,[3] are recognized by a

[3] For translation universals as resting on common aspects of human cognition, see, e.g., S. Halverson, "The Cognitive Basis of Translation Universals," *Target* 15 (2003), 197–241 and sources cited there. We should not, however, discount the finely-grained effects that historical, geographical, and social context can have on such "universals"; see H. Risku and F. Windhager, "Extended Translation: A Sociocognitive Research Agenda," *Target* 25 (2013), 33–45. For example, many descriptivists recognize in the frequent use of cognate lexemes in translation replacements a universal deriving from the reduced cognitive load required in the translator's thought process for such reductions. Nonetheless, historically-situated studies understand that cultural norms—such as modern Western approaches to lexical repetition and increased awareness of the phenome-

number of specialists in Septuagint as well, even if they have not traditionally appealed to these principles as "universals."[4] If the object of Descriptive Translation Studies is to identify probabilistic, conditional laws, whose conditions are subject to specification and elaboration,[5] the method I elaborate here has the advantage of being able to track and rank the norms employed in various translational works, thereby creating and managing sets of the constraints operative in individual translations. I envision that this systematization of constraints and their intra-corpus "matrix hierarchies" may be helpful in schematizing and conducting cross-corporal comparisons.

2. DESCRIPTIVE TRANSLATION STUDIES

2.1 Previous Approaches to Translation

Beginning in the 1960's several research paradigms developed, all treating various aspects of translation theory. Biblical scholars are perhaps most familiar with the "dynamic equivalence" paradigm, propounded by Eugene Nida.[6] This paradigm stresses the need for translators to invest their literary creations with the greatest degree of *equivalence* possible, with respect to the text's effects on the reader—whatever, exactly, the most salient intended effects of the original text are taken to be. But this paradigm is hardly the only

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non of "false friends" (i.e., historically cognate lexemes with divergent semantic values)—can affect translators' decisions. See, e.g., M. Tercedor, "Cognates as Lexical Choices in Translation: Interference in Space-Constrained Environments," *Target* 22 (2010), 177–93.

[4] Septuagintalists often explicitly cite or inadvertently hit upon G. Toury's identification of probabilistic "translational laws" (*Descriptive Translation Studies—and Beyond* [rev. ed.; Benjamins Translation Library, 100; Amsterdam: John Benjamins, 2012], 295–315 [300–1]). Toury identifies two "laws," both of which bear directly on Septuagintal studies: "the law of growing standardization" (ibid., 303–10), which is typically realized in Septuagintal studies as the translator's increasingly stereotyped and formulaic renderings (e.g., Aejmelaeus, *On the Trail*, 11–29, esp. 19: "once the equivalence was established, they did not mind working it to death"); and "the law of interference" (Toury, *Descriptive Translation Studies—and Beyond*, 310–5), commonly identified as the "Hebraization" of Greek grammar (especially syntax) in the Septuagint. Increasingly, Septuagintalists have adopted the theoretical appliances and terminology of Descriptive Translation Studies (e.g., Boyd-Taylor, *Reading between the Lines*, esp. 55–87).

[5] See Toury, *Descriptive Translation Studies—and Beyond*, 295–315 (300–1); see also A. Chesterman, *Memes of Translation. The Spread of Ideas in Translation Theory* (Benjamins Translation Library, 22; Amsterdam: John Benjamins, 1997).

[6] E.g., E. Nida, "Principles of Correspondence," in L. Venuti (ed.), *The Translation Studies Reader* (3rd ed.; London: Routledge, 2012), 141–55; for fuller discussion, see A. Pym, *Exploring Translation Theories* (London: Routledge, 2010), 6–42.

one being practiced, and translation theorists typically stress a number of problems with the model. Others argue that the translator cannot or should not be bound to crafting a semantically or functionally parallel document, but should instead deliver the translation in a form that performs a function agreed upon by the translator and the "commissioner" (either a person or a group).[7] What both of these theories share in common is their generally *prescriptive* stance towards translation: practitioners such as Nida saw their goal to be crafting a skilled translation (i.e., a target text) of important documents and literature—e.g., owner's manuals, legal codes, the biblical text, etc.—in ways that were both somehow representative of each respective source text while at the same time being functionally meaningful and socially acceptable within the intended target culture. As is the case in many fields, practitioners of these different paradigms vied for power within academic frameworks, often with the goal of gaining for their methods intellectual legitimacy or, more pragmatically, workplace opportunities.[8] Although my brief account here is an extreme oversimplification of the myriad forces and underlying currents affecting translation theories throughout this period, it is sufficient to provide context for the following statement: Descriptive Translation Studies arose as a reaction against this trend toward *prescription*.

2.2 Descriptive Translation Studies at a Glance

Instead of arguing over the *proper* way to translate texts in the modern economy or in an evangelistic religious setting, descriptivists prefer to study the principles whereby translations have arisen historically. In choosing *description* over *prescription*, these theorists opted out of several established arguments. Foremost among these arguments was the question concerning what, if anything, a translation is. Whereas the equivalence paradigm stressed *semantic* and *functional* equivalence as necessary qualifications of a true "translation," other paradigms insisted that such strictures privileged the source text without imputing adequate significance to the target text's communicative and aesthetic roles in the target culture. Traditional equivalence theory, however, disputed such texts' claims to being authentic translations: can a play by Berthold Brecht in which entire scenes are rewritten to convey to an English-speaking audience the characters' emotive utterances in the German original—or, even more drastically, to *conceal* the latent political theories espoused by the original—really qualify as a "translation"? How does this not simply become a *rewriting*, an *adaptation* of Brecht's play?[9] Descriptivists dodge this argument by accepting that every-

[7] E.g., H.J. Vermeer, "Skopos and Commission in Translation Theory," in L. Venuti (ed.), *The Translation Studies Reader* (3rd ed.; London: Routledge, 2012), 191–202; and Pym, *Exploring Translation Theories*, 43–63.

[8] See, e.g., Pym, *Exploring Translation Theories*, 49–50.

[9] This example derives from A. Lefevere, "Mother Courage's Cucum-

thing that is *understood or assumed to be a translation* qualifies as a "translation," and thus becomes material eligible for study.[10] By casting the net broadly, descriptivists have at their disposal access to the multiplex modes of rendering source texts in target languages that differ from the source language.

Similarly, descriptivists focus on the recipient target culture's appropriation of the target text[11]: they thus dodge the accusation of being unduly committed to the source text (an accusation frequently leveled against equivalence-based theories), while at the same time allowing for the legitimacy of various modes of translation in the target language. In fact, argues Toury, it is the target culture itself that initiates the translation as a way to fill gaps, even if only perceived, in its literary repertoire. These gaps themselves become worthy objects of study, since they too are facts of the target culture. As Toury notes, when multiple alternative translations in a single language are made of a single source text, they "are not likely to occupy exactly the same position and fulfil (*sic*) the same functions in the culture that hosts them. This in itself is reason enough why *no translation should ever be studied outside of the context in which it came into being*."[12] At the same time, however, descriptivists typically do not shy away from talking about the target text's relationship to its source:

> The systemic position most relevant to the kind of questions we wish to pursue is of course *the one a translation was designed to occupy when it first came into being* . . . This would be achieved by weighing the original position of the [target] text against the findings concerning its make-up and formulation, and *the way it represents its original*, while taking into account what is already

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bers: Text, System and Refraction in a Theory of Literature," in L. Venuti (ed.), *The Translation Studies Reader* (3rd ed.; London: Routledge, 2012), 203–19.

[10] Toury points to the circularity of reasoning engendered by paradigms seeking to qualify what constitutes a "translation" before analysis (*Descriptive Translation Studies—and Beyond*, 26–31). Yet as Toury notes, the criterion of "assumed translation" can pose some problems, particularly with respect to pseudo-translations (i.e., texts crafted so as to *appear* as though they were originally composed and published in a language different from the one in which they were actually first written; ibid., 20–1, 47–59). Even so, these texts themselves betray common assumptions in the putative target culture concerning translational norms commonly observed by translators; study of them as filling a particular role in the putative "target" culture is thus warranted. Chesterman provides a thoughtful and cogent survey of the various paradigms (*Memes of Translation*, 5–17); although he works from a position quite similar to that of Toury, he offers friendly critique of many of Toury's arguments as well.

[11] E.g., Toury, *Descriptive Translation Studies—and Beyond*, 18–20.

[12] Ibid., 22 (emphasis original).

> known about the translation tradition in which it came into being and of which it became part.[13]

The procedure that Toury employs to determine the precise nature of this relationship actually begins with the acceptance of the postulates underlying a translational act: in order to begin a descriptive analysis of an assumed translation, one must accept that (a) there exists some source text, even if unidentifiable, (b) to which the target text exhibits some "tangible relationships," that (c) have undergone a set of *transfer operations*.[14] The fulfillment of these three postulated criteria constitutes sufficient reason to consider the text under study a "translation," even if no source text can be identified. Once this set of criteria has been accepted, analysis of the text as a translation proceeds from the point of view of the target side: "Such texts, or aspects thereof, would first be studied on their own terms; namely, in terms of their *acceptability* on all relevant levels, not only as target language texts, but also as translations into the target culture."[15]

Although it may not always be the case that a corresponding source text can be identified, it is possible to narrow the focus of the study to smaller-scale *mappings* between the two texts. In turn, these mappings may be analyzed to determine the degree to which the target member of each pair diverges from its corresponding source member:

> Once a particular text in a language other than the target language has tentatively been marked as the corresponding source of an assumed translation, the next step is *to map the assumed translation onto its assumed counterpart*, in an attempt to determine the (uni-directional, irreversible) relations that obtain between the pairs of texts and hold them together….
>
> Owing to many inherent limitations, some of them no doubt cognitive in nature, it will normally be *segments* of the assumed target text (rather than the text as a complete entity) that would be mapped onto parallel segments of the assumed source text. In the process of mapping, the status of the former as 'translational replacements' would be established, along with what they may be said to have replaced…thus shedding light on translation problems as manifested in the particular act that yielded the target language text under observation…, and on their solutions. Shifts (from a given notion of 'maximal' or 'optimal' rendering) can also be identified and studied, if

[13] Ibid., 25; the first emphasis is original, I have added the second.

[14] Ibid., 28–31. The technical terminology of "transfer operations" is Toury's.

[15] Ibid., 31 (emphasis original).

> deemed justified, interesting and/or feasible in the framework of the research undertaken (*sic*).[16]

Toury recognizes the ambiguity in the qualification of shifts as being departures from the "optimal rendering"—but how is this "optimal rendering" to be determined? Toury continues:

> Having been thus established for a series of paired segments, and grouped together on the basis of the comparisons themselves, translation relations could then be referred to the concept of translation that may be said to underlie the text as a whole. This will be done through the mediation of a revised notion of *equivalence*, conceived of as *that translation relationship which would have emerged as constituting the norm for the pair of texts under study*.[17]

Yet this criterion, too, is ambiguous, or, at least, permissive of a number of alternative formulations. A significant problem arises from the realization that Toury's definition of "norms" is apparently not unequivocal: is a *norm* to be defined as "a revised notion of equivalence," as in the second block-quote here,[18] or should it be defined as "a given notion of 'maximal' or 'optimal' rendering" (as in the first block-quote), even when that *optimal rendering* is not one of formal equivalence?

To begin with, Toury posits an "initial norm" as the initial choice made by the translator as to the proportion to be aimed at between adopting a stance of adequacy (that is, the perceived faithfulness with which a translation represents the content and function of its source) over against acceptability. This choice is, he argues, *logically prior* to lower-level translation decisions;[19] in this regard, the *initial norm* might be compared to the translator's *commission* (in Vermeer's terminology), whether that commission is self-imposed, negotiated with a "client" of some sort, or imposed almost entirely by an external commissioner. The logical priority of the choice, however, cannot be considered an immutable constant lurking resolutely in the shadows behind any act of translation;

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[16] Ibid., 32 (emphasis original).

[17] Ibid., 32 (emphasis and lineation original).

[18] For shifts as departures from a formally equivalent translation, see J.C. Catford, "Translation Shifts," in L. Venuti (ed.), *The Translation Studies Reader* (1st ed.; London: Routledge, 2000), 141–7; and K.M. van Leuven-Zwart, "Translation and Original. Similarities and Dissimilarities I–II," *Target* 1 (1989), 151–81; *Target* 2 (1990), 69–95. I am particularly concerned here with van Leuven-Zwart's "microstructural shifts," although I do not rule out the utility of her category "macrostructural shifts."

[19] Toury, *Descriptive Translation Studies—and Beyond*, 80. For further discussion of the "norm-governed" nature of translation, see Chesterman, *Memes of Translation*, 51–85. Chesterman's categories differ from Toury's; although I find both systems helpful, I have deferred here to Toury for the sake of brevity.

rather, "the choice between adequacy and acceptability may be (or should I say: is?) repeated time and again during the [translation] act, whereby proximity to either extreme serves as a central feature of lower-level decisions."[20] Individual translation decisions (i.e., what Toury calls *micro-level decisions*) "tend to reflect" the initial norm, even if they are not entirely "made in full accord with one and the same initial norm."[21]

After the initial norm is formulated, a variety of *operational norms* are applied during the process of translation. These operational norms comprise a set of "'instructions' [that] specify what is prescribed and forbidden, as well as what is tolerated and permitted in a certain behavioral dimension . . ."[22] The instructions are socially-negotiated, with rewards for the translator's adherence to them—acceptance within the guild, additional opportunities to perform his craft for pay, etc.—and "negative, even *punitive*" repercussions ("sanctions") "in the case of the violation of a norm, or failure to act in accordance with it."[23] Yet despite the viciousness and brutal efficiency with which norms can operate, they need not ever be explicitly articulated to retain their efficacy.[24] Insofar as these socially-negotiated norms operate on translators, confining and circumscribing their behavior, it is important to note that their very existence "impl[ies] the need to *select* from among a series of alternatives, not necessarily a final one, with the additional proviso that the selection be *non-random*."[25] In short, the choices that a translator makes in producing any target text are subject to the operation of norms. Therefore, although I use the term "shift" to indicate a departure from purely formal equivalence,[26] the definition of a translation "norm" is somewhat more complicated. By "norm" I mean here *a social, political, literary, or other type of constraint underlying and motivating an established pattern of translation. Norms can, but do not necessarily, motivate any specific degree of [formal] equivalence.*

Once this terminological problem has been settled, a second one emerges: we need to ask, how does the researcher identify the various *norms* exhibited in the target text? For Toury, the answer to

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[20] Ibid., 80.

[21] Ibid., 80–1.

[22] Ibid., 63.

[23] Ibid., 64 (emphasis original).

[24] Ibid., 64.

[25] Ibid., 64.

[26] This is the traditional sense of the term (along with "transformations") as employed by most scholars involved in studying the early biblical versions; e.g., T.A.W. van der Louw, "Linguistic or Ideological Shifts? The Problem-Oriented Study of Transformations as a Methodological Filter," in A. Voitila and J. Jokirunta (eds.), *Scripture in Transition. Essays on Septuagint, Hebrew Bible, and the Dead Sea Scrolls in Honour of Raija Sollamo* (JSJSup, 126; Leiden: Brill, 2008), 107–25 (I thank A. West for this reference); and E.J. Tully, *The Translation and the Translator of the Peshitta of Hosea* (Monographs of the Peshitta Institute, 21; Leiden: Brill, 2015).

this second question relies on a feedback system, in which the "discovery procedures" already performed are confirmed through "justification procedures" moving in the opposite direction (i.e., beginning with the translational *segments* and moving higher up on the gradient towards analysis of the text as a whole. In this manner, Toury intends to isolate "the *considerations* that may have been involved in the decisions whose results were first to be identified, along with factors that may have constrained the [translational] act."[27] Moreover, this feedback system of justification does not only operate "when the discovery procedures have been exhausted. Rather, in every phase of the study, from the very start, there is room for suggesting tentative explanatory hypotheses, which will then reflect back and affect subsequent questions and discoveries. The normal process of a study is thus *helical* rather than linear . . ."[28] In Toury's method, then, the justification procedures are *always* working alongside the discovery procedures, the former serving to clarify, reformulate, and sharpen the latter *throughout* the course of the study. As conceptual entities that leave only traces of their operation, "norms . . . will still need to be recovered from instances of [translational] behaviour, using the observed regularities as a clue . . . [N]orms do not appear as entities at all, but rather as *explanatory hypotheses for actual behaviour and its perceptible manifestations*."[29]

In the following section, I describe the basic contours of Optimality Theory, with the explicit goal of elaborating on its usefulness for capturing and depicting many of the insights that Descriptive Translation Studies has made concerning probabilistic tendencies and norms in translation. I also describe how the theoretical application of Optimality Theory has already been anticipated in important ways in the work of Septuagintalist Cameron Boyd-Taylor.

3. OPTIMALITY THEORY

3.1 Origins and Basic Tenets

Optimality Theory arose in the 1990's as a response to (primarily generative) rule-based linear orderings of phonological developments. According to the classical model, inviolable *rewrite rules* operated singly and serially upon underlying phonological representations in a *linear order*.[30] Once formulated and properly

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[27] Toury, *Descriptive Translation Studies—and Beyond*, 32 (emphasis original).

[28] Ibid., 33 (emphasis original).

[29] Ibid., 65 (emphasis original).

[30] For traditional, derivational phonologies, see, e.g., N. Chomsky and M. Halle, *The Sound Pattern of English* (New York: Harper & Row, 1968); R. Lass, *Phonology. An Introduction to Basic Concepts* (Cambridge Texts in Linguistics; Cambridge: Cambridge University Press, 1984); and M. Kenstowicz, *Phonology in Generative Grammar* (Blackwell Textbooks in Lin-

arranged, the rules are predictive of derived forms in the language under study, but the rules themselves are unpredictable, and can only be formulated through careful attention to the collected assemblage of linguistic data. The variety of *possible* rules in this generative model is nearly infinite, and linguistic researchers must formulate rules that fit the evidence in such a way that the proper composition of the rules and their linear ordering operate in tandem to produce the appropriate (i.e., specified) outcome.

During the early 1990's, American linguists Alan Prince, Paul Smolensky, and John J. McCarthy challenged the classical generative model, proposing Optimality Theory as an alternative phonological theory.[31] The theory quickly gained popularity in the United States, fueled in no small part by its early tech-savvy propagation and the prominence of its initial proponents.[32] Working from a *network*-based analysis of human cognition, Optimality Theory proposed that the nearly infinite variety of serially-arranged rewrite rules held as normative by generativists could be replaced more economically by a fixed set of requirements constraining the output forms permissible within any given language. These *output constraints* operate not serially (as in generative phonology), but rather *in parallel*, with a fixed and limited set of constraints in different arrangements, corresponding to different languages and linguistic systems. This challenge to generative phonology came with at least two theoretical and methodological benefits. First, the proposal *limits* the number and complexity of possible constraints, allowing—putatively—easier and more fruitful comparisons cross-linguistically than did the generative model, wherein individual, language-specific rewrite rules often required such minute analyses that comparison of rules became difficult at best. The vagueness of Optimality Theory's generally prescriptive constraints (e.g., "Vow-

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guistics; Cambridge, MA: Blackwell, 1994).

[31] A. Prince and P. Smolensky, *Optimality Theory. Constraint Interaction in Generative Grammar* (Rutgers University Center for Cognitive Science Technical Report, 2 [Aug., 2002 version; originally published 1993]; online: http://roa.rutgers.edu/files/537-0802/537-0802-PRINCE-0-0.PDF [accessed March 22, 2013]); J.J. McCarthy and A. Prince, *Prosodic Morphology. Constraint Interaction and Satisfaction* (Rutgers University Center for Cognitive Science Technical Report, 3 [Nov., 2001 version; originally published 1993]; online: http://roa.rutgers.edu/files/482-1201/482-1201-MCCARTHY-0-0.PDF [accessed March 22, 2013]). For a fuller historical overview of the theory's origins, see R. Kager, *Optimality Theory* (Cambridge Textbooks in Linguistics; Cambridge: Cambridge University Press, 1999), xi–xiii.

[32] Personal communication, Prof. M. Macken (University of Wisconsin–Madison, Dept. of Linguistics). See also the overview of Optimality Theory in G.S. Nathan, *Phonology. A Cognitive Grammar Introduction* (Cognitive Linguistics in Practice, 3; Amsterdam: John Benjamins, 2008), 144–56; and the movement's website, roa.rutgers.edu.

els must not be nasal")[33] permits not only broad application across many languages, but also simplifies comparison across those languages. Second, the breadth of application (and the ability of the constraints to be ranked by degree of influence) allows the finite set of constraints to be applied across all languages. Linguistic peculiarities are not solved in this model by positing language-specific, language-internal rewrite rules. Instead, linguistic peculiarities are explained by way of *language-specific hierarchies* of *universally valid output constraints*.[34]

In any given language, these hierarchies are comprised of two basic *types* of constraints: *Faithfulness constraints* exert pressure on the language to maintain correspondence between the underlying phonological (or morphological, or syntactic, etc.) form of the linguistic unit and its surface representation. Three subsets of faithfulness constraints obtain: MAXIMALITY constraints (abbreviated MAX), preserve the underlying phonemes, discouraging deletion; DEPENDENCE constraints (abbreviated DEP), prevent the insertion of additional phonemes; and IDENTITY constraints (abbreviated IDENT) preserve the underlying forms of the phoneme, effectively maintaining continuity between input and output forms. At the other extreme, *markedness constraints* exert pressure to differentiate forms from their respective underlying representations—in short, markedness constraints invest the linguistic system with divergences from the underlying forms.[35] These two inclinations, faithfulness and markedness, continuity and change, conflict with one another directly—yet both are essential tendencies within languages. In opposition to generative grammar, wherein rewrite rules are presumed to be *inviolable*,[36] "[t]he basic assumption of Optimality Theory is that each linguistic output form is *optimal*, in the sense that it incurs the least serious violations of a set of conflicting constraints."[37] Constraints are *violable*, sometimes multiply so, and even *optimal* output forms will necessarily violate some constraints.

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[33] Kager, *Optimality Theory*, 9.

[34] The description of Optimality Theory in this and the following paragraphs is directly dependent on the introductions provided by Kager, *Optimality Theory*; and Nathan, *Phonology*, 144–56. In order to avoid a surplus of citations, I have refrained from citing those volumes except when quoting directly, or when providing examples drawn from Kager. The reader should recognize that *all* descriptions of Optimality Theory here—except those applied specifically to the translation tactics of *Tg. Jon.* below—derive ultimately from these introductions, unless otherwise cited.

[35] It is not altogether clear to me that Optimality Theory's theory of markedness corresponds perfectly to that of Markedness Theory (despite Kager's efforts to assert the contrary [*Optimality Theory*, 2–3]).

[36] Phonological rules were presumed to operate immediately and throughout the language by the so-called "Neogrammarian" school; subsequent research has demonstrated that this position requires further nuance, but that discussion lies beyond the scope of this paper.

[37] Kager, *Optimality Theory*, 8.

Most of the actual output forms, whether words, phrases, or of higher rank, will *satisfy* most constraints in any given analysis, while violating only a few. The most salient set of possible contenders, therefore, will be readily whittled down to a single output form through the application of a few violated constraints in any single analysis. Yet one of the principles of Optimality Theory that has been most subject to criticism in the linguistic community is its insistence that the cognitive faculty tasked with generating candidates for a given realization (symbolized by Optimality theorists as GEN) actually generates an *infinite number of candidates for every linguistic unit*.[38] The putatively infinite capacities of GEN can be safely disregarded in the analysis presented below, in favor of a more modest model in which a constrained number of output candidates (generated both by habitual linguistic replacement and by non-habitual, innovative consideration of possible translation values) are subjected to evaluation (EVAL) by the translator.[39]

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[38] See e.g., Ibid., 8: "the grammar generates and then evaluates an infinite set of output candidates, from which it selects the optimal candidate . . ." (emphasis added); see also the more developed discussion, p. 26–7; but cf. the more thorough description at p. 19: "Gen is a function that, when applied to some input, produces a set of candidates, *all of which are logically possible analyses of the input*" (emphasis added). Compare also the "*possibly* infinite" output of GEN in L. Karttunen, "The Proper Treatment of Optimality in Computational Phonology," esp. § 3.1 (emphasis added; online: http://roa.rutgers.edu/files/258-0498/roa-258-karttunen-2.pdf [accessed March 22, 2013]).

Accordingly, the nearly-infinite majority of this infinite number of candidates is immediately excluded through their egregious violation of numerous faithfulness constraints, and only a few salient contenders are subjected to the more detailed analysis of the evaluation faculty (EVAL). This principle has been alternately challenged and defended by computational linguists (e.g., J. Eisner, "Efficient Generation in Primitive Optimality Theory," in *Proceedings of the 35th Annual Meeting of the Association for Computational Linguistics* [1997], 313–20; online: http://acl.ldc.upenn.edu/P/P97/P97-1040.pdf (accessed March 28, 2013); idem, "Easy and Hard Constraint Ranking in Optimality Theory. Algorithms and Complexity," in J. Eisner, L. Karttunen, and A. Thériault [eds.], *Finite-State Phonology. Proceedings of the 5th Workshop of the ACL Special Interest Group in Computational Phonology [SIGPHON]* [Luxemburg, Aug. 2000; online: http://arxiv.org/abs/cs.CL/0102019 ; accessed March 28, 2013], 22–33; W.J. Idsardi, "A Simple Proof that Optimality Theory is Computationally Intractable," *Linguistic Inquiry* 37 [2006], 271–5; although cf., e.g., J. Heinz, G. Kobele, and J. Riggle, "Evaluating the Complexity of Optimality Theory," *Linguistic Inquiry* 40 [2009], 277–88). Heinz et al. argue that Eisner and Idsardi (among others) have improperly characterized the constraint sets of EVAL posited by most versions of Optimality Theory. In any event, the application of EVAL seems to me to present more problems than it solves, at least as it pertains to the generation of translation variants.

[39] For an example, see Chesterman's application of Karl Popper's philosophy of scientific inquiry. Chesterman advocates viewing translating as

The *optimality* of actual output forms is taken for granted in Optimality Theory; the researcher's task is to arrange the system—the hierarchy of constraints—such that it accurately predicts these putatively optimal forms. In service to this end, Optimality Theory's notational system involves tableaux (a technical term employed by Optimality theorists) and a variety of symbols that serve as a shorthand for the various evaluations reached over the course of the evaluation process.[40] These charts offer a synchronic diagram of the full process undertaken by EVAL: the linguistic input and the most salient output candidates appear in the left-most column, and the remaining columns are headed by the constraints against which the candidates are to be tested. (The constraints are arranged in the order that the researcher has determined to be most conducive to selecting the *optimal* [i.e., actual] output candidate, with each abbreviated in small capitals.) An asterisk (*) marks each violation of the pertinent constraint incurred by the output candidate in the left-most cell of the row, and when the point of disqualification has been reached, an exclamation point (!) marks the "fatal" violation (i.e., the violation beyond which the candidate is definitively disqualified, marked with darkened cells; the cells of the optimal candidate are also darkened once they are no longer diagnostic for the analysis). The optimal candidate is marked with an arrow (→), or, in several notational systems, a pointing hand (☞). Candidates are eliminated from contention as soon as they have incurred a violation of a highly-ranked constraint if there are other candidates that have not incurred the same number of violations of the same constraint. When two or more candidates incur violations

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a recurring series of successive stages of proposing a "tentative theory" and then "error elimination" (*Memes of Translation*, esp. 16–7, 117–45; for comparable discussions in Descriptive Translation Studies see also A. Pym, *Translation and Text Transfer* [Publikationen des Fachbereichs Angewandte Sprach- und Kulturwissenschaft der Johannes Gutenberg-Universität Mainz in Germersheim, A/16; Frankfurt a.M.: Lang, 1992], 175–8; subsequently published online as: [rev. ed.; Tarragona: Intercultural Studies Group, 2010], 183–6; http://usuaris.tinet.cat/apym/publications/TTT_2010.pdf [accessed May 1, 2013]; D. Gile, *Basic Concepts and Models for Interpreter and Translator Training* [rev. ed.; Benjamins Translation Library, 8; Amsterdam: John Benjamins, 2009], 101–28; and J.C. Sager, *Language Engineering and Translation—Consequences of Automation* [Benjamins Translation Library, 1; Amsterdam: John Benjamins, 1994], 236–8). Pym seems to account for (near-)simultaneous generation of multiple tentative texts, with the subsequent elimination of "non-optimal T[arget] T[ext]s" (*Translation and Text Transfer*, 175–6), comparable to the contemporaneous generation-evaluation process of Optimality Theory, but Gile and Sager both seem to opt for a process comprising serially recursive generation-evaluation pairs.

[40] My lexical choices in this description are particularly indebted to Kager (*Optimality Theory*, 13–4), and overlap to a large extent with his terminology, although I have attempted throughout to refrain from using his precise locution.

of the same constraint, their respective violations of the next-highest constraint are evaluated. Similarly, when two or more candidates incur violations of the same constraint, the candidate with more violations is disqualified.

I provide the following tableaux using the input **malk*, which Semitists will recognize as the (reconstructed Proto-Hebrew) form underlying Tiberian Hebrew מֶלֶךְ (*mɛlɛχ*) "king."[41] Although several pertinent constraints could be proposed, I have evaluated the candidates with respect to three constraints: a markedness constraint against word-final consonant clusters (i.e., a variation of the rule that produces anaptyxis between R_2 and R_3 in traditional analyses of Hebrew, abbreviated here as *CC#)[42]; a markedness constraint favoring the *segholation* of the base vowel (FAVOR-ɛ); and input-output constancy of the linear order and identity of segments (a combination of two standard constraints of Optimality Theory, abbreviated here as IO-IDENT[43]). Tableau 1 presents the analysis when the constraints are organized in the order given above, with the constraint *CC# *dominating* (i.e., being ranked higher than) FAVOR-ɛ and both of these constraints dominating IO-IDENT. The relationship of domination (siglum: ≫) is presented in (1):[44]

[41] For a discussion of the Tiberian Hebrew problem at hand using a more developed model of Optimality Theory (the *sympathy* explanation of opacity), see J.J. McCarthy, "Sympathy, Cumulativity, and the Duke-of-York Gambit," in K. Baertsch and D.A. Dinnsen (eds.), *Optimal Green Ideas in Phonology* (Indiana University Working Papers in Linguistics, 1; Bloomington, Ind.: Indiana Linguistics Club, 1999), 57–91 (76); and idem, "Sympathy and Phonological Opacity," *Phonology* 16 (1999), 331–99; for an argument against sympathy using the same Tiberian Hebrew data, cf. W.J. Idsardi, "Clarifying Opacity," *The Linguistic Review* 17 (2000), 337–50 (346–47). I must confess some skepticism with respect to the ability of McCarthy's notion of SYMPATHY to account for the development of Tiberian Hebrew segholates.

[42] In Optimality Theory notations, as in much theoretical linguistic notation, an asterisk represents that a certain form is ungrammatical and does not occur. This stands in contrast to the use of asterisks in most historical linguistic studies, where the siglum is used to represent reconstructed historical forms.

[43] The "IO" portion of the siglum stands for "Input-Output," and is drawn specifically from precursor studies in Optimality Theory.

[44] Note that this *markedness* constraint ironically flattens the markedness of the various Biblical Hebrew segholates deriving from underlyingly distinct **qatl-* and **qitl-* forms. This irony is symptomatic of the very real problems in Optimality Theory approaches to phonology that have been attacked by some linguists.

(1) *CC# ≫ FAVOR-ε ≫ IO-IDENT

Tableau 1 (Example: proper outcome)

/MALK/	*CC#	FAVOR-ε	IO-IDENT
(A) *MALK*	*!	*	
(B) *MALƐX*		*!	**
(C) → MƐLƐX			***

As Tableau 1 indicates, the first output candidate (a) is maximally faithful to the linearity of the phonological segments of the input /malk/. However, because it incurs a violation of the highest-ranked constraint, *CC#, it is eliminated from candidacy already at the point of the second column; its violation of the constraint FAVOR-ε is irrelevant in this analysis. The second output candidate (b) incurs a violation of the second constraint, whereas the third candidate (c) does not; candidate (b) is fatally eliminated by this violation, and its multiple violations of the constraint IO-IDENT, which it shares with (c), do not matter. But this is not the only possible solution to the problem, since the two highest-ranked constraints in Tableau 1, *CC# and FAVOR-ε, could have been reversed with little effect on the outcome, since the optimal candidate (c) violates neither. Tableaux 2 and 3 present alternative analyses. In Tableau 2, both candidates (a) and (b) incur a violation of the highest-ranked constraint and are thus definitively removed from contention before candidate (c) has incurred any violations. Ultimately, the two candidates are eliminated in the same order as in Tableau 1. In Tableau 3, similarly, candidates (a) and (b) are eliminated at the same time, since both incur a violation of the highest constraint. Candidate (c)'s violation of the next-highest constraint is irrelevant in this analysis.

Tableau 2 (Example: proper outcome)

/malk/	FAVOR-ε	*CC#	IO-IDENT
(a) *malk*	*!	*	
(b) *malɛχ*	*!		**
(c) → *mɛlɛχ*			***

Tableau 3 (Example: proper outcome)

/malk/	FAVOR-ɛ	IO-IDENT	*CC#
(a) *malk*	*!		*
(b) *malɛχ*	*!	**	
(c) → *mɛlɛχ*		***	

Ultimately, the only way to determine which of these three proposed constraint hierarchies is correct would be to work painstakingly through the corpus of Biblical Hebrew, testing each of them against the data, and adducing particular examples that would target certain pairs or orders of constraints. In the analysis given in section 4 (below), I provide an example of this process. What is clear, however, from Tableaux 1–3, is that the constraint IO-IDENT must not be ranked as the highest of the three, since if it were accorded domination over both of the other constraints, then the correct (actual) output candidate would incur a violation before candidate (a):

Tableau 4 (Example: improper outcome)

/malk/	IO-IDENT	*CC#	FAVOR-ɛ
(a) X *malk*		*	*
(b) *malɛχ*	**!		*
(c) *mɛlɛχ*	***!		

A significant point of convergence between historical, generative, and Optimality Theory approaches to phonology should be recalled at this point, which suggests that my use of **malk* here is heuristic and unrepresentative of how an Optimality Theory analysis would appropriately deal with an ancient language. Historical linguistics holds a model of the serial application of developmental rules through time, as in (2), with successive generations slowly adopting the successive stages of the reconstructed development:

(2) **malk* > **malɛk* > **malɛχ* > (Tib.) *mɛlɛχ*

From the standpoint of the study of the historical development of Hebrew, this gradual development can be proven through recourse to texts transcribed in Greek (i.e., Origen's *Secunda*), and vocalized in pre-Tiberian (i.e., Palestinian and Babylonian) pointing systems. Most historical linguists do not examine the cognitive operations

working to effect this development, and would probably accept a model in which speakers have as their underlying representation simply the form which they have come to learn as grammatical (whether it be /malk/, /malɛk/, etc.).[45] Although the continual and unending application of the *processes* actually occasioned each *development*, leading to the (phonemic) forms preserved in the text, it is my understanding that neither generativists nor optimality theorists would claim that we have access to the surface realizations or output forms that speakers may have (inadvertently and habitually) applied to the underlying phonological form.[46]

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[45] Somewhat differently, both generative and optimality phonologists admit a historical development of pronunciation, but argue that speakers applied, respectively, rewrite rules or optimality constraints to the underlying phonemic representation of their lexicon. Nathan, for example, differentiates between the historical *phonological developments* that changed the phonemic realization of the underlying form, as in (2), and the *phonetic processes* that speakers would have applied to those inputs (Nathan, *Phonology*, 103–13). In his discussion of opacity, Kager presents a similar theory, in which opacity can be traced to the operation of slightly reconfigured constraint hierarchies at different levels (*Optimality Theory*, 381–85), but he does not connect this view explicitly to historical linguistics, as does Nathan. Idsardi ("Clarifying Opacity," 346) addresses this historical perspective briefly, but dismisses it because "this [solution] gives Optimality Theory two distinct computational devices with which to do phonology . . . In addition, the levels must be empirically motivated . . ." Although I am generally sympathetic to Idsardi's objections to Optimality Theory's less than adequate handling of opacity, it is not clear to me that he has effectively dismantled an "intermediate levels" approach to opacity with this argument. As Nathan points out (*Phonology*, 153) concerning recent applications of "usage-based theory," "[J.] Bybee . . . has argued that words (and probably larger units too) are stored exactly as heard (and as produced)." This view of language storage conflicts with both Optimality Theory and serial-based phonological theories, and, in my view, might be cause to subordinate both to a unifying theory in which serial derivations at the historical level can be explained, in the words of Idsardi, by "Optimality Theory as the theory of the internal structure of a process" ("Clarifying Opacity," 349).

[46] The primary difference between generative, derivational theories and Optimality Theory is in how these two models conceptualize the production of surface representations (or output forms) from the underlying representations (or input forms). For derivational theorists, the application of rewrite rules is habitual, ingrained, and hardly problematic for the immensely powerful computing resources of the human brain. Optimality theorists concur that the human brain is immensely powerful, but hold that all pertinent output constraints are run on the underlying forms at the same time, in parallel. This theoretical model is belied by the appearance of the Tableaux and the work-flow involved in processing them: we work linearly from left to right, recognizing that fatal violations of constraints in one column render irrelevant violations in "subsequent" columns. But this appearance is unrepresentative of the way our minds actually process phonological data, argue Optimality theorists: because the output form

3.2 Application of Optimality Theory to Descriptive Translation Studies

For my present purposes, it is sufficient to express my own lingering dissatisfaction with the application of Optimality Theory to phonology, while at the same time suggesting that Optimality Theory's attempts to systematize and universalize tendencies of speakers (or translators) may prove to be a useful heuristic and notational tool for a descriptive approach to translation studies. In particular, Optimality Theory's affirmation of the cross-linguistic universality of output constraints, combined with the language-specific peculiarity of constraint hierarchies, may be a major breakthrough in the cross-corporal analysis of translation.

Two salient points arose in my summary of Toury's methodological reflections in section 2, both of which justify the application of Optimality Theory in service to Descriptive Translation Studies. First, the centrality of operational *norms*—as codified in the "prevailing concept of translation"—in the translational methodology that Toury effectively (and, probably, *rightly*) imputes to translators anticipates the two major categories of constraints operating in Optimality Theory. Toury reminds us that we are forced to recognize and account for the fact that "actual translation decisions will normally be found to involve some combination of, or compromise between, the pressures of the two extremes [adequacy and acceptability], the choice between which constitutes the initial norm."[47] The tendency toward *adequacy* evokes the so-called *faithfulness*-constraints, in which the impulse is to preserve the initial phonological identity of the lexeme under investigation (IDENT), without adding (DEP) or deleting segments (MAX). In addition to recognizing a translator's attempts to achieve adequacy, Toury seeks to identify the underlying "considerations" or "constraints" underlying the departures (*shifts*) from each source text segment; Toury connects these shifts—sometimes obligatory, sometimes not—with the impulse toward *acceptability* in the target language. Some such shifts are inevitable,[48] but "encountering 100% regularity [of shifts]

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undergoes the evaluative process (EVAL) in a single step, there are no intermediate representations to serve as inputs for an ever-lengthening chain of rewrite rules. This theoretical stance is one of the tenets of Optimality Theory most frequently cited and argued against by members of opposed theoretical camps; see especially the discussion of Optimality Theory approaches to *opacity* in Kager, *Optimality Theory*, 372–424; and Idsardi, "Clarifying Opacity," 337–50. There are, of course, many other issues of contention, and the debate has proven to be somewhat intractable.

[47] Toury, *Descriptive Translation Studies—and Beyond*, 81.

[48] A. Popovič, "The Concept 'Shift of Expression' in Translation Analysis," in J.S. Holmes, F. de Haan, and A. Popovič (eds.), *The Nature of Translation. Essays on the Theory and Practice of Literary Translation* (The Hague: Mouton, 1968), 78–87 (79).

should arouse *immediate suspicion* as being too good to be true."[49] These departures correspond strongly to Optimality Theory's second macro-category of constraints: the so-called *markedness*-constraints (which typically fall into a wider variety of sub-categories than do the IDENT constraints).

A second significant point connects these two paradigms. In attempting to identify regularities in the features of continuity and in systematic changes in a given translator's decisions, Descriptive Translation Studies effectively tries to articulate the degree of systematicity employed in crafting each translation, identifying the areas of abnormality—weaknesses in those putatively-monolithic representations—and attempting to explain them. Optimality Theory too aims to provide a comprehensive, systematic statement of a language's *grammar*, which it conceives of as the hierarchy of output constraints, while at the same time explaining those points of anomaly. It is therefore not out of line to describe translational systems as "grammars" (as I have done in the title of this study). Optimality Theory, I will argue, provides researchers with a "grammatical" architecture and notational system capable of capturing and accounting for any departures from Toury's "initial norm" that the researcher encounters.

3.3 Anticipation of Optimality Theory in LXX-Studies

As noted above, I point here to an important recent study of Septuagintal translation style in which many of the principles associated with Optimality Theory that I apply here explicitly are adumbrated. Cameron Boyd-Taylor's 2011 monograph, *Reading between the Lines*, adopts a sophisticated theoretical stance in the service of understanding the Septuagint as a product of the culture that produced it—in Toury's terms, as a fact of the target culture.[50] Although a thorough discussion of Boyd-Taylor's study remains beyond the scope of this study, it is worthwhile pointing to several theoretical principles he employs, because they intersect with the proposals laid out here.

First, just as Toury's application of Descriptive Translation Studies employs the idea of socially-imposed norms of translation as constraints, so too does Boyd-Taylor stress the importance of translational norms in constraining how the translator has gone about moving the text from one linguistic system into a different linguistic system.[51] Boyd-Taylor's project throughout the book is to recover and identify "the relevant conventions [i.e., norms] that were operative in that culture when the text was produced."[52] He reminds us further that these norms "do not operate in isolation,"

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[49] Toury, *Descriptive Translation Studies—and Beyond*, 81.
[50] Boyd-Taylor, *Reading between the Lines*, 55–87.
[51] Ibid., 39, 57–68.
[52] Ibid., 60.

but instead "are to be viewed in terms of their inter-relations."[53] In this assertion, Boyd-Taylor's theoretical stance accords well with that of Optimality Theory, noted above. It will be recalled that the network model assumed by Optimality Theory presumes a set of constraints operating in parallel, rather than serially; the same simultaneousness of application pervades Toury's norms.

Second, Boyd-Taylor adopts Toury's concept of a hierarchy of norms. Some of these norms are nearly mandatory for the translator to obey in order to avoid censure or sanction, others less so. Toury (and Boyd-Taylor following him) schematizes three groups of norms—as summarized by Boyd-Taylor, these categories are "basic or primary norms," "secondary norms or tendencies," and "tolerated (permitted) choices."[54] A similarly schematic dissection of the constraints governing translation are found in Boyd-Taylor's relaying of Christiane Nord's "constitutive conventions" (i.e., socially-imposed norms) and "regulative conventions" (norms more broadly applicable in translation).[55] In both nomenclatures, those norms, conventions, and choices lower in the hierarchy are more violable than are those ranked higher in the hierarchy (as in Optimality Theory). I have adopted neither Toury's nor Nord's schema in the present study, although my optimality-based analysis similarly attempts to identify those norms that are ranked higher than others. I have not attempted to schematize the constraints into particular categories for the simple reason that Optimality Theory conceives of the constraint hierarchy as lying on an undifferentiated continuum. Nonetheless, my approach remains consistent with those cited by Boyd-Taylor: Toury's and Nord's respective schematizations provide heuristic models allowing researchers to refer to variously-ranked constraints (Toury) emerging from different sources (Nord) with a simple short-hand.

This brief summary of Boyd-Taylor's work has pointed to a few points of tangency between his theoretical framework and the basic principles of Optimality Theory. A more thorough review would enumerate many more such connections; for example, one might compare Boyd-Taylor's notions of "quantitative fidelity" with Optimality Theory's MAX and DEP constraints.[56] A more involved study would also note a few differences. Moreover, I leave

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[53] Ibid., 61.

[54] Ibid., 60, and *passim*.

[55] Ibid., 71, citing C. Nord, *Translating as a Purposeful Activity: Functionalist Approaches Explained* (Manchester: St. Jerome Publishing, 1997), 58.

[56] I have not attempted to formulate these constraints below, because the text under scrutiny does not exhibit substantial shifts in quantity that would lend themselves to such investigation. My sense, however, is that what Boyd-Taylor has called "quantitative fidelity" (*Reading between the Lines*, *passim*) actually involves two closely aligned constraints, one of the MAX type (e.g., "represent in the target text everything that is present in the source text"), and one of the DEP type (e.g., "add nothing to the target text that is not present in the source text").

aside discussion of the larger thrust of Boyd-Taylor's study, namely, that the Septuagint was composed according to a principle of interlinearity.[57] The position I have adopted here, in which I view optimality as "a description of the translator's sense of an appropriate analogue in the target language" for what can be found in the source text[58] does not commit me to the principle of interlinearity.

In section 4, I present a sketch of what an Optimality Theory approach to Descriptive Translation Studies might look like.

4. TESTING THE SYSTEM

It is necessary now to synthesize and apply the theoretical and methodological frameworks that I have summarized above. The goal of this section is to demonstrate that Optimality Theory and its admittedly enigmatic notational system can be applied fruitfully to a study informed by and participating in the project of Descriptive Translation Studies. By *fruitful application*, I mean that Optimality Theory provides the schematic and notational means whereby we can (a) determine, represent, and quantify significant constraints comprised by the target literary system's *norms*; (b) rank those constraints in their order of dominance; (c) apply them to a translated biblical text subdivided into appropriately-sized *segments* of translation replacement; and (d) compare the segments' respective constraint hierarchies in order to determine whether more specific subcategories of constraints need to be established.

Optimality Theory provides us with an investigatory system whereby the sub-classification of constraints permits a principled method of exploring and reconstructing the precise hierarchical ordering of constraints by reference to subsets of micro-level translational decisions in a given text. Insofar as a single hierarchical constraint arrangement can be shown to constitute the dominant constraint-hierarchy operative in a given text, this arrangement constitutes a quantification of Toury's *initial norm*; I call this the *matrix hierarchy*, and we may think of it as the "grammar" of the translation under review. The primary task of an Optimality-based Descriptive Translation Study consists of the reconstruction of this "grammar." It is important to note here that this investigation is primarily concerned with establishing the *optimality* of the translation in the translator's processes of cognition, insofar as those processes are discoverable from the information provided by the text at hand.[59] Previous biblical studies have already gestured toward this principle in identifying literal transla-

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[57] Ibid., 88–111.

[58] I have drawn this locution from personal communication from Ronald Troxel.

[59] A similar problem is alluded to by Boyd-Taylor (*Reading between the Lines*, 24), who distinguishes between the mental processes of the translator(s) and those of the later recipients of the text. I am unconcerned here with developing a profile of "optimal" translation in the modern day.

tion as an "easy technique,"[60] or lexically-based interlinearity as an explanatory "*concept of equivalency*" driving the formation of the Septuagintal text.[61]

Yet, when we encounter instances where our established matrix hierarchy does not predict the correct (i.e., actual) replacement candidate, we are alerted to a possible hierarchy anomaly. This prompts us to analyze possible causes for the anomaly. In some cases, we may infer "grammatical" reasons for the anomaly having to do with the formal or dynamic equivalence that the translator attempted to encode with the replacement text (i.e., grammatical constructions required by the target language, genre conventions inserted to satisfy the target polysystem, and so on). In other cases, we may find that the hierarchy anomaly has occurred because of the translator's concern to supply "non-grammatical" (contextual or pragmatic) information such as theological explication and so on. In reconstructing the causes of these departures, we gain additional insight into the interpretive strategies of the translators.[62] As will be seen, in the hierarchy anomaly examined below, the solution is a purely mundane one, relating to the linguistic constraints of the target language.

The text used in the following experiment is *Tg. Jon.* of 2 Sam 11:1 (see text-box).[63] I have selected this short sample text because of the relative simplicity of the study that it ensures. Most of the segments have been translated with such a high level of formality that they permit concise formulation of the basic faithfulness constraints. Yet, there are enough dynamic ("expansionistic") tendencies in the target text that we may analyze at least a few shifts from the source text as well.

This short sample text has the advantage of having as its target language another member of the Northwest Semitic language group, closely related to Biblical Hebrew. This filial relationship mitigates the number of obligatory shifts to be considered, because morphological and syntactic categories remain relatively consistent between the two languages; lexical cognates also mitigate the number of shifts to be accounted for.[64] On the basis of what has been

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[60] Aejmelaeus, *On the Trail*, 61–3, citing J. Barr, *The Typology of Literalism in Ancient Biblical Translations* (Mitteilungen des Septuaginta-Unternehmens, 15; Göttingen: Vandenhoeck & Ruprecht, 1979), 26, 50; see also R.L. Troxel, *LXX-Isaiah as Translation and Interpretation: The Strategies of the Translator of the Septuagint of Isaiah* (JSJSup, 124; Leiden: Brill, 2008), 88.

[61] Boyd-Taylor, *Reading between the Lines*, 99 (italics original).

[62] Compare the similar concerns of van der Louw, "Linguistic or Ideological Shifts?" 107–25.

[63] See the more traditional analysis of *Tg. Jon.* 2 Sam 11:1 provided by E. van Staalduine-Sulman, *The Targum of Samuel* (SAIS, 1; Leiden: Brill, 2002), 545–46.

[64] Contrast the frequent need within studies of the Septuagint to evaluate the degree to which the Greek is representative of "translationese"; N. Fernández Marcos, *The Septuagint in Context: Introduction to the Greek Version*

said so far concerning Optimality Theory's faithfulness constraints and adequacy to the source text, we may postulate faithfulness constraints for syntactic identity (siglum: IO-IDENT:SYN); morphological identity (siglum: IO-IDENT:MORPH)[65]; phonological identity (siglum: IO-IDENT:PHON); and semantic identity (siglum: IO-IDENT:SEM).[66] As we will see in the following sections, these faithfulness constraints interact with various markedness constraints to enact the "grammar" of Targum Jonathan's translation technique.

2 SAM 11:1

MT:

וַיְהִי לִתְשׁוּבַת הַשָּׁנָה לְעֵת צֵאת הַמַּלְאכִים וַיִּשְׁלַח דָּוִד אֶת־יוֹאָב
וְאֶת־עֲבָדָיו עִמּוֹ וְאֶת־כָּל־יִשְׂרָאֵל וַיַּשְׁחִתוּ אֶת־בְּנֵי עַמּוֹן וַיָּצֻרוּ עַל־
רַבָּה וְדָוִד יוֹשֵׁב בִּירוּשָׁלָם:

TG. JON.:

וַהֲוָה לִזְמַן סוֹפֵה דְּשַׁתָּא לְעִדָּן מִפָּק מַלְכַיָּא וּשְׁלַח דָּוִיד יָת יוֹאָב
וְיָת עַבְדּוֹהִי עִמֵּיה וְיָת כָּל יִשְׂרָאֵל וְחַבִּילוּ יָת בְּנֵי עַמּוֹן וְצָרוּ עַל
רַבָּה וְדָוִיד יָתֵיב בִּירוּשְׁלֶם:

of the Bible (trans. W.G.E. Watson; Atlanta: SBL, 2000), 3–17; Aejmelaeus, *On the Trail*, 205–22, esp. 207; van der Louw, *Transformations in the Septuagint*, esp. 57–92; Boyd-Taylor, *Reading between the Lines*, esp. 95–9.

[65] As one anonymous reviewer helpfully pointed out, it is unwise to describe the Hebrew and Aramaic forms as "morphologically identical," since formally the Hebrew participle is not the same as the Aramaic participle; for a similar theoretical position, see W. Croft, *Radical Construction Grammar: Syntactic Theory in Typological Perspective* (Oxford: Oxford University Press, 2001), esp. 45–61. Nonetheless, I use this term to describe cognate forms that are historically related (i.e., derived from the same Proto-Northwest Semitic form) and whose similar (but not necessarily identical) phonological realization would have bolstered a cognitively-routinized association between the two, especially given the similarity of semantic values. Therefore, I retain the principle of "morphological faithfulness" in the context of translation even while conceding its theoretical limitations. Accordingly, while I speak of "morphological correspondence" below (see, e.g., the term "morphosyntactic correspondence" employed by Boyd-Taylor, *Reading between the Lines*, *passim*), that phrase should be recognized as Optimality Theory shorthand for "morphological category commensurateness informed by phonological similarity and semantic identity."

[66] I use IDENTITY constraints here as a catch-all category encompassing MAX and DEP constraints as well; a more thorough analysis could conceivably consider these constraints separately, especially with regard to syntax.

4.1 Verbal Replacement

4.1.1 The Temporal Indicator וַיְהִי

The relative ranking of two of the constraints posited above—IO-IDENT:MORPH and IO-IDENT:SEM—can be tentatively established as a "working norm" by examining the first word of 2 Sam 11:1. The Hebrew narrative *wayyiqtōl* (**way-yaqtul*) form וַיְהִי begins the verse. It is unnecessary to presuppose that the cognitive framework of the translator generates an *infinite* number of possible replacements, as Optimality Theory often supposes. I find it much more likely that several possible replacements are generated;[67] the number of these possible replacements is already inherently limited by the two basic general input-output identity constraints posited above, and we may simply begin with the reduced set of the two most *salient* forms selected by the two IO-IDENT constraints, the semantically identical וְהָוָה, and the morphologically commensurate וִיהֵי.[68] In this [replaced] + [replacement] pairing, we make the empirical observation that the translator has selected the semantically identical[69] Aramaic **w-qatal* form וַהֲוָה over its most salient alternative, the morphologically correspondent **w-yaqtul* form

[67] Moreover, the process of generation may entail the use of habitualized or routinized lists and flowcharts; see, e.g., J. Levý, "Translation as a Decision Process," in L. Venuti (ed.), *The Translation Studies Reader* (1st ed.; London: Routledge, 2012), 148–59; and Toury, *Descriptive Translation Studies—and Beyond*, 296–7. For an attempt to classify types of replacements, see Chesterman, *Memes of Translation*, 89–116.

[68] Strictly speaking, וִיהֵי is the Aramaic reflex of **w-yaqtulu*, not of **w-yaqtul*. However, I am unable to find any examples in *Tg. Onq*. and *Tg. Jon.* of the latter form of √הוה (using the basic search functions of Accordance 8.0.4), and Biblical Aramaic uses a different morph for the volative (לֶהֱוֵא; e.g., Dan 2:20). *Tg. Jon.* 2 Sam 24:17 renders Heb. תְּהִי with Aram. תֵּהוֵי, suggesting that the long form, as given here, may have been the closest approximant available, morphologically speaking. Additionally, *Tg. Job* 1:21 does render the Hebrew apocopated form with יהא (cf. also *Tg. Qoh.* 10:19), which *may* allow for an apocopated Aramaic cognate, but without additional pointing we cannot identify the precise form used.

[69] These morphs are "semantically identical" insofar as both denote verbal past tense in combination with a conjunction. In interlinear morphemic notation, both may be represented as: COP-be.PST. A morphological distinction obtained, of course, between the Hebrew *wayyiqtōl* form (< **wayyaqtul*), which typically indicates narrative past-tense, and what will be seen to be its habitual Aramaic replacement, the *wə-qətal* (< **w-qatal*) form. I simplify here, since in BH the *wayyiqtōl* form is, synchronically speaking, a single morpheme denoting past tense (e.g., J. Cook, *Time and the Biblical Hebrew Verb. The Expression of Tense, Aspect, and Modality in Biblical Hebrew* [LSAWS, 7; Winona Lake, Ind.: Eisenbrauns, 2012], 256–65).

וַיְהִי.[70] This allows us to rank the IO-IDENT constraints provisionally in the following order:

(3) IO-IDENT:SEM ≫ IO-IDENT:MORPH

The following chart presents the hierarchy of these two constraints in fuller detail, capturing the fact that, although the **w-qatal* form violates the IO-IDENT:MORPH constraint, that constraint is of lower stature than the IO-IDENT:SEM constraint violated by the **w-yaqtul* form:

Tableau 5

HEB.: וַיְהִי	IO-IDENT:SEM	IO-IDENT:MORPH
(A) → וְהָיָה		*
(B) וַיְהִי	*!	

4.1.2 The Remaining Hebrew wayyiqtōl Verbs

The same constraint hierarchy is established in the replaced-replacement pairs וַיִּשְׁלַח ~ וּשְׁלַח ("he sent") and וַיָּצֻרוּ ~ וְצָרוּ ("they besieged"). Another replacement set, again comprising verbs, displays the same hierarchy established in (3), but forces us to consider broadening our inquiry by further subdividing one of our posited constraints. The replacement set וַיַּשְׁחִתוּ ~ וְחַבִּילוּ exhibits the same priority of IO-IDENT:SEM over IO-IDENT:MORPH, since the Hebrew **way-yaqtul* is rendered in Aramaic with a **w-qatal* form. But in this case, unlike the three other examples in this verse, the root used by the translator (√חבל *pael*[71]) is not cognate to that of the replaced Hebrew segment (√שׁחת *hiphil*), although it does seem to bear similar senses in a variety of Aramaic dialects.[72]

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[70] I retroject the respective Hebrew or Aramaic realizations back to their shared underlying Proto-Northwest Semitic antecedents, in order to account for the shared morphological history of these two forms (IO-IDENT:MORPH).

[71] Consonantal gemination is irregularly employed in manuscripts; see the variety noted by, e.g., W.B. Stevenson, *Grammar of Palestinian Jewish Aramaic* (Oxford: Oxford University Press, 1924; repr. Ancient Language Resources; Eugene, Ore.: Wipf & Stock, 1999), 12 § 2.3.

[72] E.g., M. Sokoloff, *A Dictionary of Jewish Palestinian Aramaic* (2nd ed.; Ramat-Gan, Israel: Bar Ilan University Press, 2002), 185; idem, *A Dictionary of Jewish Babylonian Aramaic of the Talmudic and Geonic Periods* (Ramat-Gan, Israel: Bar Ilan University Press, 2002), 426–7. It is worth noting that the verbal root √חבל *pael* (Aram.) is used to render the Hebrew √שׁחת nearly ubiquitously in 2 Samuel (*piel*: 1:14; 14:11; 24:16; *hiphil*: 11:1; 20:20; 24:16). In only one instance (20:15) is the Hebrew segment containing √שׁחת *not* replaced by a corresponding Aramaic segment containing √חבל. But even here, the larger Aramaic segment contains the

Because there exists in Aramaic a root cognate to Hebrew √שׁחת,[73] this variation might recommend the separation of SEMANTIC FAITHFULNESS (IO-IDENT:SEM) from LEXICAL FAITHFULNESS (IO-IDENT:LEX), with the former dominating the latter.[74]

4.1.3 The Participle and Infinitive

Other replacement verbal forms in the sample text demonstrate adherence to the same set of constraints. For example, the translator rendered the Hebrew participle יוֹשֵׁב with the semantically-identical Aramaic cognate יָתֵיב. In this first case, all semantic elements of the replacement demonstrate faithfulness to those of the replaced word; there would presumably have been little resistance to this replacement. Similarly, we see in the segment contained in (4) that the translator has replaced the Hebrew infinitive construct with a semantically-identical morphological form (the Aramaic G-stem infinitive[75]) bearing the same syntactic and semantic relations to the surrounding replacements.

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term: Heb. מַשְׁחִיתִם לְהַפִּיל הַחוֹמָה "destroying (in order to) break down the wall" has been replaced with Aram. מִתעַשְׁתִין לְחַבָּלָא שׁוּרָא "plotting to destroy the wall." In short, the morphologies have been preserved while the constituent roots have been shifted around; this example serves to demonstrate the complexity encountered in studying translational norms.

[73] A lemma search of the *Comprehensive Aramaic Lexicon* (online: http://cal1.cn.huc.edu/ [accessed Feb. 8, 2013]) produces a meaningful cognate found in several Aramaic dialects. Three separate senses are given for the D-stem of the root: "to stain" (Syr.), "to ruin" (OA, Sam.), "to delete" (Syr.). Further study would be necessary to explore why this root was not used to render the Hebrew in *Tg. Jon.*

[74] The familial relationship between Aramaic and Hebrew renders possible and necessitates a constraint IO-IDENT:LEX. The isolation of this constraint permits circumspection towards etymological "false friends" (i.e., cognate roots with variant semantic fields or discursive distributions, such as Aram. √ענה "to begin to speak," which influenced the later [LBH] semantic value of Heb. √ענה "to answer"). The same constraint, obviously, would also not be accorded high position in an Optimality Theory analysis of the "grammar" of LXX translation technique, since nearly *every* lexical unit undergoes IO change.

[75] Aramaic does not differentiate the G-stem infinitives absolute and infinitives construct morphologically; see, e.g., R. Degen, *Altaramäische Grammatik der Inschriften des 10.–8. Jh. v. Chr.* (AKM, 38,3; Wiesbaden: Steiner, 1969), 116–7; H. Bauer and P. Leander, *Grammatik des Biblisch-Aramäischen* (Hildesheim: Olms, 1995), 105 § 33; F. Rosenthal, *A Grammar of Biblical Aramaic* (6th ed.; PLO, 5; Wiesbaden: Harrassowitz, 1995), 49 § 111; and T. Muraoka and B. Porten, *A Grammar of Egyptian Aramaic* (HdO; Leiden: Brill, 1998), 108–10. However, some morphological variation does occur in the affixes of the derived stems when in the construct state.

(4) לְעִדָּן מִפָּק מַלכַיָא ~ לְעֵת צֵאת הַמַּלְאכִים

lə-ʿēt	*ṣē(ʾ)t*
lə-ʿiddān	*mippāq*
LOC-time.SG|CNST[76]	depart.INF(|CNST)

ham-məlāk-îm[77]

malk-ay-yā(ʾ)

DEF.ART-king-MPL[78]

"at the time of the departing of kings" →

"at the time when kings went out (to war)"[79]

This correspondence occurs despite the fact that Hebrew and Aramaic infinitives in the G-stem are formed with different morphological augmentations. In this second case, the IO-IDENT:MORPH (i.e., MORPHOLOGICAL CORRESPONDENCE[80]) con-

[76] The two lexemes used in Hebrew and Aramaic meaning "time, season" are typically realized in different genders. Hebrew uses the feminine singular *ʿēt*, whereas Aramaic uses the masculine singular *ʿiddān*. I have collapsed this distinction in the interlinear morphemic notation by omitting reference to the gender of the noun entirely. It is important to note that this transformation is an obligatory one, following on normal lexical usage within each linguistic system.

[77] The division of *hammələākîm* into three (morphemes) is, of course, a simplification of the actual structure of the word, in which the nominal base **mal.k* has been supplemented with the masculine plural morpheme **a.îm*, after which a process of phonetic reduction took place. For our purposes, it is sufficient to mark the base noun and the MPL suffix as separate.

[78] I disregard here the obligatory structural shift in which the Aramaic counterpart *malk-ay-yā(ʾ)* exhibits the form: king-MPL-DEF.ART. This structural shift will be assumed in the discussion below. I also disregard the consonantal text ("messengers"), preferring to read the Masoretic *raphe* as intending "kings." See, e.g., P.K. McCarter, *II Samuel. A New Translation with Introduction and Commentary* (AB, 9; New York: Doubleday, 1984), 279, 284–5; and van Staalduine-Sulman, *Targum of Samuel*, 545 n. 473.

[79] For this use of interlinear morpheme translation and the constituent sigla, see C. Lehmann, "Directions for Interlinear Morphemic Translations," *Folia Linguistica* 16 (1982), 199–224; W. Croft, *Typology and Universals* (2nd ed.; Cambridge Textbooks in Linguistics; Cambridge: Cambridge University Press, 2003), xix–xxii; B. Comrie, M. Haspelmath, and B. Bickel, *The Leipzig Glossing Rules. Conventions for interlinear morpheme-by-morpheme glosses* (http://www.eva.mpg.de/lingua/resources/glossing-rules.php [accessed March 8, 2013]); and S.L. Shead, *Radical Frame Semantics and Biblical Hebrew. Exploring Lexical Semantics* (Biblical Interpretation Series; Leiden: Brill, 2011), xxii–xxiii.

[80] See n. 65 for qualification of this term.

straint is shown as hierarchically superior to any sort of PHONOLOGICAL CORRESPONDENCE constraint (IO-IDENT:PHON) that we might posit with respect to the historically-developed form Proto-Semitic **qutul-*. The preference of Aramaic *wə-qətal* to render Hebrew *wayyiqtōl*, which was observed above (4.1.1, esp. Tableau 5) may then be represented as the prioritization of IO-IDENT:MORPH (which is probably linked to IO-IDENT:SEM) over IO-IDENT:PHON.

4.2 Temporal Clause Replacement

There are two temporal clauses beginning the sample text. The first verb that was treated in section 4.1.1 (וְהָיָה) is embedded in the first of these temporal clauses, and can be ignored in the present discussion. The infinitive construct handled in the previous section (4.1.3; מְפָקְ) is embedded in the second, but because of its syntactic relationships to the other members of the temporal clause it is necessary to treat that verb again below.

4.2.1 ". . . At the Turn of the Year"

The discussion begins with the Aramaic replacement of the prepositional phrase central to the first temporal clause: לִתְשׁוּבַת הַשָּׁנָה. This Hebrew phrase occurs five times in the HB, in four different contexts (2 Sam 11:1 [par. 1 Chr 20:1]; 1 Kgs 20:22, 26; 2 Chr 36:10). Of these five occurrences, all three of the Deuteronomistic passages are replaced in *Tg. Jon.* by Aramaic לְזִמַן סוֹפַה דְשַׁתָא; the two Chronistic occurrences are not represented in the extant Targum manuscripts. Therefore, we may establish the Aramaic replacement as the *normal* replacement of the underlying Hebrew; its distribution cannot be limited only to 2 Samuel. But *why* is this longer phrase the typical replacement, given its syntactic divergence from its source?

The Aramaic phrase that the translator selected *amplifies* the Hebrew source text in two ways.[81] First, the word לִתְשׁוּבַת has been replaced by a two-word counterpart, לְזִמַן סוֹף, which effects an *explicitation*[82] of the source through the word זִמַן. This explicitation immediately introduces a temporal sense into the construction, mitigating the need to wait for the unit of temporal measurement at

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[81] *Amplification* occurs when "The translation uses more words than the source text to express the same idea" (Pym, *Exploring Translation Theories*, 14, based on the original edition now available in English as J.-P. Vinay and J. Darbelnet, *Comparative Stylistics of French and English: A Methodology for Translation* [trans. J.C. Sager and M.-J. Hamel; Benjamins Translation Library, 11; Amsterdam: Benjamins, 1995], 192–3).

[82] *Explicitation* is the "Procedure whereby the translation gives specifications that are only implicit in the source text"; Pym, *Exploring Translation Theories*, 14, based on Vinay and Darbelnet, *Comparative Stylistics*, 116, 180–5. This would fall under van Leuven-Zwart's rubric of "semantic modulation/specification" ("Translation and Original [I]," 160).

the end of the phrase. Second, the construct relationship of the Hebrew source segment לִתְשׁוּבַת הַשָּׁנָה has been replaced by the common Aramaic NOUN-POSS.PNG + ד + NOUN-DEF.ART syntagm (סוֹפַה דְשַׁתָא). These modifications permit us to reconstruct several different *possible* replacements of the Hebrew, collected in (5):

(5)

a. לְסוֹף שַׁתָא

lə-sôp	*šat-t-ā(ʾ)*
LOC-end.MSG|CNST	year-FSG-DEF.ART[83]

b. לְסוֹפַה דְשַׁתָא

lə-sôp-ah	*də-šat-t-ā(ʾ)*
LOC-end.MSG-POSS.3FSG	GEN-year-FSG-DEF.ART

c. לְזמַן סוֹף שַׁתָה

li-zman	*sôp*	*šat-t-ā(ʾ)*
LOC-time.MSG|CNST	end.MSG|CNST	year-FSG-DEF.ART

d. לְזמַן סוֹפַה דְשַׁתָא

li-zman	*sôp-ah*	*də-šat-t-ā(ʾ)*
LOC-time.MSG|CNST	end.MSG-POSS.3FSG	GEN-year-FSG-DEF.ART

Our first task is to identify the constraints that would lead the translator to select (5d) as the appropriate replacement, and then to determine the relative hierarchy of the posited constraints. By analogy with the constraints already devised, we posited above that there is an IO faithfulness constraint that would preserve the syntactic framework, constituents, and linearity of the Hebrew original (IO-IDENT:SYN). The use of a simple construct chain is a *legal* construction in Aramaic, but why is it not the *optimal* one? There must be a competing (and, in this case, superior) markedness constraint that prefers a syntactic construction more *acceptable* to Aramaic speakers.[84] This markedness constraint opts for the NOUN-POSS.PNG + ד + NOUN-DEF.ART syntagm in this context, thus

[83] It is this alternative that from a syntactic perspective is formally equivalent to Heb., with semantic shift of תְּשׁוּבָה.

[84] E.g., Stevenson, *Grammar of Palestinian Jewish Aramaic*, 24. However, the reader should compare the findings of S.E. Fassberg, *A Grammar of the Palestinian Targum Fragments from the Cairo Genizah* (HSS, 38; Atlanta: Scholars Press, 1990), 251–2. Fassberg notes that three syntagms are possible, and that NOUN-POSS.PNG + ד + NOUN-DEF.ART does not occur as frequently as does the simple construct syntagm in the corpus under study. The problem is undoubtedly more complex than intimated here, but considerations of space preclude further analysis.

marking (5a) and (5c) as undesirable in relation to the alternative translation solutions. This constraint we shall name POSS+*DƎ-*. A second markedness constraint also necessarily outranks IO-IDENT:SYN; this would be a discourse-level pragmatic constraint, favoring the introduction of the word זְמַן to mark temporal clauses (EXPL.TIME).[85] This constraint may be a broader feature of Aramaic temporal clauses, or it may simply be a literary means of *explicitation* used to render Hebrew temporal clauses. Our three posited constraints, then, can be ranked as in (6) and Tableau 6:

(6) POSS+*DƎ-* ≫? EXPL.TIME ≫ IO-IDENT:SYN

Tableau 6

לִתְשׁוּבַת הַשָּׁנָה	POSS+*DƎ-*	EXPL.TIME	IO-IDENT:SYN
(a) לְסוֹף שַׁתָּא	*!	*	
(b) לְסוֹפַה דְשַׁתָּא		*!	*
(c) לְזִמַן סוֹף שַׁתָּה	*!		*
(d) →לְזִמַן סוֹפַה דְשַׁתָּא			**

It is possible that the two highest-ranked constraints in (6) may be transposed; more detailed study would be needed in the Aramaic rendering of Hebrew temporal expressions. But incidentally, there is external evidence for the cross-linguistic existence of the EXPL.TIME constraint as a preferred (*acceptable*) grammatical feature of Aramaic. The Chronicler's refraction of 2 Sam 11:1 (= 1 Chr 20:1) has made the temporal nature of the phrase explicit through the addition of Hebrew עֵת, rendering לְעֵת תְּשׁוּבַת הַשָּׁנָה. The syntactic structure of this phrase is identical to that of (5c) above: LOC-time.MSG|CNST end.MSG|CNST year-FSG-DEF.ART, bringing the Hebrew rendition into closer concert with the Aramaic. Yet the general Semitic NOUN-POSS.PNG + ד + NOUN-DEF.ART syntagm had ceased to be productive in Hebrew, making it impossible for the Aramaic-influenced LBH to convert the Hebrew into a form syntactically identical with what was later chosen to be the optimal Aramaic rendering of the Hebrew source segment. At this point, sociolinguistic constraints must also be brought to bear, as literary LBH seems to have prioritized the EXPL.TIME constraint over

[85] For the unexpected insertion of זְמַן in various temporal phrases in 1–2 Samuel, see, e.g., 1 Sam 1:3, 7, 20; 2:19; and elsewhere. Fuller analysis might be needed to sustain the existence of this constraint, but four instances in the first two chapters of Samuel suggest its plausibility.

POSS+*DƎ-* (or, more appropriately from the historical perspective, POSS+**DV-*/*ΘV-*).

4.2.2 ". . . At the Time When Kings Go Out to War"

The second temporal clause of the verse appears in (4) above, and is reproduced here as (7):

(7) לְעִדָּן מִפָּק מַלכַיָא ~ לְעֵת צֵאת הַמַּלְאכִים

A number of replacements deserve attention here, because they prove problematic when analyzed against the constraints identified in the preceding analysis. These replacements are three-fold:

(α) The Aramaic renders Hebrew עֵת as עִדָּן instead of as זְמַן. Here we must contrast the LBH use of עֵת in 1 Chr 20:1 to denote the chronological point normally rendered by Aramaic זְמַן. This situation demonstrates the one-to-many equivalence between Hebrew עֵת and its semantic equivalents in Aramaic. The Aramaic translator apparently (and correctly) recognized the "time" denoted by the Hebrew here as a culturally-experienced "season" (עִדָּן), in contrast to the temporally-constrained "time" (זְמַן) at which the year "turned." Of the possible constraints, semantic faithfulness (IO-IDENT:SEM) stands out as clearly operative.

(β) The replacement of צֵאת with מִפָּק, as demonstrated above (4.1.3), demands that the faithfulness constraint IO-IDENT:MORPH (probably tightly connected with IO-IDENT:SEM) be ranked superior to IO-IDENT:PHON.

(γ) The Hebrew definite masculine plural noun הַמַּלְאכִים is predictably rendered by the morphologically identical Aramaic replacement מַלכַיָא. Here, both IO-IDENT:SEM and IO-IDENT:MORPH are obeyed, and it is impossible (and unnecessary) to determine whether either dominates the other, since neither is activated. The more significant problem here is the omission of the syntagm NOUN-POSS.PNG + ד + NOUN-DEF.ART, which was seen to be favored by the constraint POSS+*DƎ-* in (6) and Tableau 6 above. Instead, the syntax of the Hebrew is followed more closely than in the previous temporal clause—even under the apparently same syntactic conditions as applied in the previous clause. Why?

In order to analyze this discrepancy, we apply the same constraint hierarchy that was operative in Tableau 6 above (POSS+*DƎ-* ≫ EXPL.TIME ≫ IO-IDENT:SYN), collapsing the middle constraint, which is satisfied by all candidates in Tableau 7. We then include the SEMANTIC FAITHFULNESS constraint IO-IDENT:SEM, which is violated by those options that use זְמַן to render Heb. עֵת. We saw immediately above (α) that this lexical correspondence does not

apply when the "time" falls within the semantic domain of "season." The constraint IO-IDENT:SEM is currently of indeterminate dominance in its relationship with IO-IDENT:SYN, since we have not been able to analyze their interaction independently. (Fortunately, for the present analysis in Tableaux 7 and 8, their strict hierarchy does not matter.)

Tableau 7

לְעֵת צֵאת הַמַּלְאכִים	POSS+*DƎ*-	IO-IDENT:SYN	IO-IDENT:SEM
(a) לִזמַן מִפָּק מַלכַיָא	*!		* (לִזמַן)
(b) לִזמַן מִפָּקְהֹן דְמַלכַיָא		*	*! (לִזמַן)
(c) לְעִדָן מִפָּק מַלכַיָא	*!		
(d) X לְעִדָן מִפָּקְהֹן דְמַלכַיָא		*	

As depicted by Tableau 7, we are left without a clear choice for the optimal Aramaic replacement. It would seem that option (d) would be the optimal translation replacement for the Hebrew temporal phrase, since it violates a lower-ranked constraint (IO-IDENT:SYN) than does option (c) (POSS+*DƎ*-). We have two choices here: either the ordering of the constraints has been rearranged between the two temporal phrases of *Tg. Jon.* 2 Sam 11:1, or there is a higher-ranked constraint violated by (d) but obeyed by (c). We consider the first option the less preferable of the two: although it is not impossible that the *matrix hierarchy* should be rearranged between segments (see below, section 5.2.2), this option is *a priori* to be adapted only when other available options fail. So we reanalyze Tableau 7, positing a highly-ranked, contextually-specific constraint that disprefers the use of the syntagm NOUN-POSS.PNG + ד + NOUN-DEF.ART in cases featuring the verbal noun (*INF.POSS+*DƎ*-); this is the only difference between this example and that in section 4.2.1. This highly specific markedness constraint stands in direct contradiction to the constraint POSS+*DƎ*-, and forces (a)'s and (d)'s violation of a highly-ranked, contextually-specific constraint *before* (c)'s violation of a more broadly non-contextual constraint:

(8) *INF.POSS+*DƎ-* ≫ POSS+*DE-* ≫ IO-IDENT:SYN, IO-IDENT:SEM

Tableau 8

	*INF.POSS+*DƎ-*	POSS+ *DƎ-*	IO-IDENT:SYN	IO-IDENT:SEM
(a)		*		*! (לְזמַן)
(b)	*!		*	* (לְזמַן)
(c) →		*		
(d)	*!		*	

In this case, an apparent hierarchy anomaly points to a grammatical phenomenon in the target language. If we run a search in a computerized database of the Targum's text for infinitives (absolute and construct) augmented by a personal possessive suffix and followed by ד + NOUN-DEF.ART, we find overwhelming evidence that this syntagm was non-productive in the Aramaic dialect employed by the translator of Samuel. Of 299 exemplars of infinitives from *Tg. Jon.* 2 Samuel,[86] none of them appears in this syntagm.[87] This

[86] Using the electronic search engine Accordance, I compiled the following list: *Infinitives absolute*: 2 Sam 1:6; 3:24; 5:19; 9:7; 11:1; 12:14; 13:19; 15:8; 15:30; 16:5; 17:10, 11, 16; 18:2, 3, 25; 19:43; 24:24. *Infinitives construct*: 2 Sam 1:1, 2, 14 (2x), 16, 18 (2x); 2:1, 4 (2x), 7, 19, 21, 22, 23, 26, 28; 3:10 (2x), 11, 12 (3x), 13 (4x), 14, 17 (2x), 18, 19, 23, 25 (5x), 27, 33, 34 (2x), 35 (3x), 37; 4:4 (2x), 5, 8, 10 (2x); 5:1, 3, 6 (2x), 8, 11, 12, 17 (2x), 19, 22, 24 (3x); 6:1, 2, 10, 12, 18, 20, 21 (2x); 7:4, 5, 7, 8, 10, 20, 21, 23 (3x), 26, 27 (2x), 29; 8:2 (2x), 3, 5, 10 (2x), 13; 10:2, 3 (3x), 11, 13, 19; 11:10, 11 (3x), 13, 15, 19 (3x), 20; 12:4 (2x), 7, 9, 10, 17, 18, 23; 13:2 (2x), 5, 6, 7, 9, 11, 14, 16 (2x), 25, 28, 30, 33, 36 (2x), 39; 14:1, 7 (2x), 10, 11 (2x), 13, 14 (2x), 15, 16 (2x), 17, 19, 20, 25, 26, 29 (3x), 32 (2x); 15:2 (2x), 5, 6, 8 (2x), 10 (2x), 12, 13, 14, 16, 20, 24, 28, 31; 16:2 (3x), 7, 11, 21; 17:6, 9, 14, 16, 17 (2x), 21, 22, 29; 18:3 (2x), 5, 8, 11, 12, 16, 18, 20; 19:1, 3, 4 (2x), 7 (2x), 9, 10, 11, 12 (3x), 13, 16 (2x), 19 (3x), 20, 21, 29, 32, 33, 44; 20:2, 3, 5, 7, 9, 13, 15, 18 (4x), 19; 21:2, 4 (2x), 5, 10, 16, 17; 22:3, 5, 23, 26, 28, 29, 35, 39, 40 (2x), 48, 49, 51; 23:1, 3, 4 (2x), 5, 6 (3x), 7 (5x), 9, 10, 16, 17 (2x); 24:1 (2x), 4, 11, 13, 16, 21 (2x). The division between infinitives construct and absolute is an arbitrary one in Aramaic, since both have the same underlying form and the distinction is made only on the basis of the form's morphosyntactic environment.

[87] Some infinitives construct are suffixed with a personal pronoun, when the person is the subject or, less frequently, the object of the verb (2

distribution (more appropriately: non-appearance) of the INF-POSS.PNG + ד + NOUN-DEF.ART syntagm demands that we consider it an extremely rare form, if not entirely unproductive. We have discovered a hierarchy anomaly, which we resolved not by a reorganization of the matrix constraint hierarchy, but rather through the addition of a highly-ranked, contextually-specific constraint for which all textual evidence points to its linguistic reality.

4.2.3 Remaining Segments

The remaining segments of the passage pose no particular problems. Aside from the many verbs, which have been analyzed above in 4.1.2, we find:

(α) the compound definite noun phrase that serves as the definite object of וַיִּשְׁלַח ~ וּשׁלַח:

אֶת־	יוֹאָב	וְאֶת־	עֲבָדָיו	עִמּוֹ	וְאֶת־	כָּל־	יִשְׂרָאֵל
יָת	יוֹאָב	וְיָת	עַבדּוֹהִי	עִמֵּיה	וְיָת	כָּל	יִשׂרָאֵל

Both these compound noun phrases may be mapped (in left-to-right order) as:

ʾet-yôʾāb	*wə-ʾet-*	*ʿăbād-ā(y)w*	*ʿimm-ô*
yāt yôʾāb	*wə-yāt*	*ʿabdô-hî*	*ʿimm-ēh*
OBJ=PN_{Joab}	CONJ-OBJ=	servant-MPL.3MS.POSS	LOC-3MS

wə-ʾet-	*kol-yiśrāʾēl*
wə-yāt	*kol yiśrāʾēl*
CONJ-OBJ=	DET=GN_{Israel}

The syntax of this prepositional phrase is standard, in both Hebrew and Aramaic, and all the lexical choices the Aramaic translator used in his replacements are cognates of their corresponding Hebrew segments (thus satisfying IO-IDENT:LEX and, relatedly, IO-IDENT:SEM).

(β) the definite noun phrase that serves as the definite object of וְחַבִּילוּ ~ וַיַּשְׁחִתוּ:

יָת בְּנֵי עַמּוֹן ~ אֶת־בְּנֵי עַמּוֹן

Sam 1:2; 3:13 [2x], 25 [3x]; 5:6, 24; 7:10; 8:10; 10:2, 3 [2x]; 11:19; 12:17, 23; 13:6, 16, 36; 14:26; 15:8, 10, 12; 16:7; 17:21; 19:1, 4, 19, 32, 33; 21:2; 22:23; 23:6, 16, 17 [*bis*]; 24:16).

(γ) the prepositional phrase that serves as the indirect object of וְצָרוּ: ~ וַיָּצֻרוּ

עַל רַבָּה ~ עַל־רַבָּה

(δ) the prepositional phrase serving as the indirect object of וְדָוִיד יָתֵיב ~ וְדָוִד יוֹשֵׁב:

בִּירוּשְׁלֶם ~ בִּירוּשָׁלִָם

In (β), (γ), and (δ), the close correspondence between the replaced Hebrew text and the Aramaic replacement is clear. Here, too, the syntax of each of these phrases (and of the clauses of which they are constituent) is standard, in both Hebrew and Aramaic. As in (α), all the lexical choices the Aramaic translator used in his replacements are cognates of their corresponding Hebrew segments, with the sole exception of √חבל, which was treated above in 4.1.2. In each case, the constraints IO-IDENT:SYN, IO-IDENT:SEM, IO-IDENT:MORPH, IO-IDENT:PHON, and IO-IDENT:LEX all exert control, but do not conflict with one another.

5. CONCLUSION

5.1 Summary and Conclusions

In this paper, I have provided brief overviews of the principles and methodologies of Descriptive Translation Studies and of Optimality Theory. In the detailed analysis of *Tg. Jon.* 2 Sam 11:1, I have tried to show:

> (i) how these two theoretical approaches can be used in tandem to track and rank the norms employed in various translational works, thereby creating and managing sets of the constraints operative in individual ancient translations of the Hebrew Bible;
> (ii) that the theory and formalisms of Optimality Theory may be used to capture and organize the translation descriptions provided through Descriptive Translation Studies, even if statistical methods as a whole can or should be rejected[88]; and
> (iii) that the notational system employed by practitioners of Optimality Theory allows us to formalize observations in a straightforward manner, capturing anomalies in translation and subordinating translation norms to universally-valid principles, even if those principles receive different degrees of authority in the variant approaches to translation employed in antiquity.

[88] See, e.g., the arguments of Aejmelaeus, *On the Trail*, 208–13.

Through this analysis, I have proposed several faithfulness constraints, of varying rank:

Particularly important in this study were the constraints SYNTACTIC FAITHFULNESS (IO-IDENT:SYN) and SEMANTIC FAITHFULNESS (IO-IDENT:SEM), both of which we have seen to have exerted a significant, highly-ranked constraint on the Aramaic translator. We also posited a MORPHOLOGICAL CORRESPONDENCE constraint (IO-IDENT:MORPH), a PHONOLOGICAL CORRESPONDENCE constraint (IO-IDENT:PHON), and a LEXICAL FAITHFULNESS constraint (IO-IDENT:LEX), which were ranked lower than IO-IDENT:SYN and IO-IDENT:SEM.

As further study is performed, it may be necessary to sub-classify some of these constraints. For example, one might propose that the SEMANTIC FAITHFULNESS constraint (IO-IDENT:SEM) contains at least two sub-categories: SEMANTIC FAITHFULNESS OF TENSE, ASPECT, AND MOOD (IO-IDENT:SEM_TAM)—each of which could probably in turn be isolated as its own constraint—and SEMANTIC FAITHFULNESS TO VERBAL PROFILE (IO-IDENT:SEM_ACT). As sub-categories of the MORPHOLOGICAL FAITHFULNESS constraint (IO-IDENT:MORPH), we may eventually need to separate various aspects of verbal morphology in a more detailed investigation. Replacement set alternations of singular-for-plural or masculine-for-feminine, for example, would potentially demand sub-classification of the constraint IO-IDENT:MORPH into IO-IDENT:MORPH_GNDR and IO-IDENT:MORPH_NUM. Fuller investigation would be necessary to identify the full inventory of possible (and necessary) constraints.

Above I also proposed three markedness constraints: one of pragmatic literary significance, EXPLICITATION OF TIME (EXPL.TIME), and the others of more direct significance to target language acceptability, FAVOR POSS + *DƎ-* SRUCTURE (POSS+*DƎ-*) and UNGRAMMATICALITY OF VERBAL NOUN IN POSS + *DƎ-* SRUCTURE (*INF.POSS+*DƎ-*). I proposed three hierarchical orderings:

(6) IO-IDENT:SEM ≫ IO-IDENT:MORPH

(7) POSS+ *DƎ-* ≫? EXPL.TIME ≫ IO-IDENT:SYN

(8) *INF.POSS+*DƎ-* ≫ POSS+ *DƎ-* ≫ IO-IDENT:SYN, IO-IDENT:SEM

These constraint hierarchies are, of course, provisional proposals requiring much further confirmation before they may be held out as operative constituents of the matrix hierarchy structuring *Tg. Jon.* 2 Samuel's translation technique.

What is remarkable about these three markedness constraints in light of Optimality Theory is that they are all *language-specific*. In fact, this points to a significant departure in my framework from earlier Optimality Theory models. Whereas Optimality Theory posits a single set of universal constraints, all of which operate

throughout the world's languages, my own application may need to revise this view slightly. I am forced on the one hand to posit a group of faithfulness constraints mandating (or merely recommending) the transmission of grammatical, semantic, and pragmatic features of the source text into the target text (compare Toury's concept of "adequacy"). Further study may allow the qualification of these constraints as common across translation practices as a whole, in a way similar to Christiane Nord's "regulative conventions." On the other hand, it would seem that the constraints I have identified as markedness constraints must be language- and culture-specific (compare Toury's concept of "acceptability"). This tentative differentiation of translation-universal faithfulness constraints and language-specific markedness constraints requires further elaboration in future studies.

5.2 Directions for Further Investigation

A few complications exist here that have not yet been addressed, but which would be pertinent for further investigations into the possibility of Optimality Theory analysis of translation techniques.

5.2.1 Delimitation of Segments

One such complication is the accurate identification of [replaced] + [replacement] segment couplings. The method that I have established here seems best to apply to translations that are "integral," that is, translations that "[contain] no additions or deletions transcending the sentence level."[89] Although the corresponding segments of the investigation conducted here were easily identified, the issue is not always so straightforward.[90] From the cognitive standpoint of the translator, translation problems are never simply solved and left behind, but rather they establish a residual cognitive network of previous equivalence-based solutions, often with the effect of creating entrenched lexical and morphological correspondences, even if the [source text segment] + [target text segment] coupling does not provide for semantic adequacy in some circumstances.[91] Two theoretical conclusions follow. First, in theory, the boundaries between segments are significantly more fluid than is implicit in the presentation given above; and, as Toury recognizes, correspondence units are not limited to "identical" scope and rank.[92] Second, we must take into account cognitive linguistics' reaction to the hard-and-fast distinction between semantics and pragmatics held by more formalist, generative approaches to lin-

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[89] Van Leuven-Zwart, "Translation and Original (I)," 154.

[90] Toury (*Descriptive Translation Studies—and Beyond*, 115–29) provides a well-reasoned description of the precise means by which corresponding segments of source text and target text are determined.

[91] Ibid., 116–7.

[92] Ibid., 117.

guistics. Ronald Langacker disputes the concrete division between semantics and pragmatics, arguing instead that the two facets of meaning-making in linguistic utterances are ends of a continuous, gradable continuum, with no established boundaries between the two.[93] If this account is accepted, then we must also accept the possibility that different linear (syntactic) orderings project variant pragmatic structures (including some phonetically realized with *no* additions of morphological or phonological data[94]), and that these structures may necessarily be rendered in the target language in vastly different ways. That is, their solutions may violate IO-IDENT:SYN and IO-IDENT:MORPH while at the same time satisfying IO-IDENT:PRAG. If so, how are we to analyze IO-IDENT:SEM? And are we certain that we have correctly evaluated the boundaries of the segment?

It may, at times, be exceedingly difficult to make individual arguments for segmental correspondences. An example of this difficulty is posed by a case mentioned by Lefevere, in which the translator has added dialogic exchanges between the two interlocutors in order to capture more fully—more *dynamically*—the snippet of conversation:

> Yvette: Dann Können [*sic*] wir ja suchen gehn, ich geh gern herum und such mir was aus, ich geh gern mit dir herum, Poldi, das ist ein Vergnügen, nicht? Und wenns zwei wochen dauert?
>
> (Then we can go look, I love walking about and looking for things, I love walking about with you, Poldi, it's so nice, isn't it? Even if it takes two weeks?)

becomes

> Yvette: Yes, we can certainly look around for something. I love going around looking, I love going around with you, Poldy…
>
> The Colonel: Really? Do you?
>
> Yvette: Oh, it's lovely. I could take two weeks of it!
>
> The Colonel: Really? Could you?[95]

The expansion of the dialogue here suggests that the translator felt that equivalence—of whatever sort he was attempting to convey—

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[93] R.W. Langacker, *Cognitive Linguistics. A Basic Introduction* (Oxford: Oxford University Press, 2008), 36–43; see also J.R. Taylor, *Cognitive Grammar* (Oxford Textbooks in Linguistics; Oxford: Oxford University Press, 2002), 103–5.

[94] I.e., what Toury calls "*zero* lexical substance" in another context (*Descriptive Translation Studies—and Beyond*, 136).

[95] Lefevere, "Mother Courage's Cucumbers," 212–3; the more literal translation of the German (in parentheses) is Lefevere's, the more expansionistic translation that of E. Bentley, *Mother Courage and Her Children* (London: Methuen, 1967), 36 (as cited by Lefevere).

could only be achieved by blurring the lines of the segments, amplifying and clarifying the component segments of material of the original by re-voicing the questions as spoken by the Colonel. This passage exemplifies P. Zabalbeascoa's claim that "it may be the case that not all [translation] solutions are purely segmental in their nature."[96]

5.2.2 "Non-Grammatical" Hierarchy Anomalies

Another major complication arises when we discover hierarchy anomalies that cannot be explained as simply as the one encountered in section 4.2.2. As Toury points out, we should not expect a single hierarchical ordering of constraints to obtain ubiquitously throughout any given text.[97] There will inevitably occur some instances where the operative constraint hierarchy of a specific segment departs from the text's matrix hierarchy. I agree with Toury in his assertion that "norms themselves are far from monolithic: not only are some of them more binding than others at any given moment, but their validity and potency may not be fixed for a very long time."[98] I would hypothesize that the larger the text, the more such hierarchy anomalies are likely to occur.

However, Optimality Theory provides us with an interpretive framework to understand these temporary rearrangements of constraints. Because rearrangements of constraints occur between small subsets of the total constraint inventory, we might posit that the remainder of the inventory—the constraints that remain satisfied—*do not* experience reordering, thus *maintaining the vast bulk of the matrix hierarchy intact*. Therefore, there is no need to consider the boundaries between the various matrix hierarchies we encounter in any given text to be hard and fast. Thus, although the precise orderings of constraints may shift minimally between segments, we should be attentive to Toury's larger critique of positing rigid differentiation between variant matrix hierarchies: "*the borderlines between adjacent types of constraints are diffuse*: there is no fixed point of passage from one to the other."[99]

Finally, it would be worthwhile to consider briefly the bearing this concept may have on putative cases of a translator's theological intentions. In recent years, scholars of Septuagint (and the other versions) have grown increasingly wary of attributing transformations to the deliberate (or, sometimes even subconscious) theological decisions made by translators. For example, Anneli Aejmelaeus provides guidance for claiming theological intent of the

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[96] P. Zabalbeascoa, "From Techniques to Types of Solutions," in A. Beeby et al. (eds.), *Investigating Translation* (Benjamins Translation Library, 32; Amsterdam: John Benjamins, 2000), 121.

[97] Toury, *Descriptive Translation Studies—and Beyond*, 81, 89.

[98] Ibid., 65.

[99] Ibid., 66 (emphasis original).

translators: "Only in those cases in which the translator deviates from the normal procedure of linguistic representation of the original…is it justified to talk about interpretation in the sense of intended alteration of the wording for theological (or other) motives."[100] Theo A.W. van der Louw's practices exhibit an even more cautious approach to identifying cases of purportedly "theological" influence exerted by a translator's confessional commitments.[101] The method proposed here offers qualitative and quantifiable data to identify the borderlines between constraint hierarchies. With refinement, it is my hope that this method will be able both to highlight specific areas where further consideration of "theological influence" can be isolated, and to lay to rest some claims of the translator's intent to introduce theological motifs, in light of the presence of common translational operations.

5.3 Final Comments

Further complications arise with the recognition that the model presented here assumes that the translator's "grammatical" *performance* is a perfect representation of his *competence*. But the imprecision with which performance mirrors competence is a long-established tenet of linguistics. The model presented here cannot hope to account fully for performance errors (such as misreadings caused by graphic confusion, for example), or, more difficult yet, faulty input brought about through the textual transmission process.[102] Even if its set of constraints were extended exponentially, it might be found that the model cannot account for the full range of macro- and micro-contexts that present syntactically-, morphologically-, semantically-, and lexically-similar problems to be solved in different ways, depending on the constellation of contextual features confronting the translator.[103] Future investigations could raise additional questions pertaining to the degree to which faithfulness constraints are attributable to the roteness or habituation with which translators work, and markedness constraints to the active cognitive effort translators must expend in grappling with their source texts (and even whether these rough generalizations apply).

The preceding analysis has been necessarily brief and schematic. A more complete analysis would necessarily encompass a

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[100] Aejmelaeus, *On the Trail*, 219.

[101] E.g., van der Louw, *Transformations in the Septuagint*, 367.

[102] The problem of "performance" is, of course, a delicate issue. We must be ever conscious of the possibility that the Hebrew *Vorlage* of a translated version is not identical to the Massoretic Text as it is represented in Codex Leningradensis. Indeed, Aejmelaeus seems to reify this possibility as one of her operating principles when working with a difficult Septuagintal text (e.g., *On the Trail*, 149).

[103] See the many problems raised by W. Wilss, "Decision Making in Translation," in M. Baker (ed.), *The Routledge Encyclopedia of Translation Studies* (London: Routledge, 1998), 57–60.

much broader textual sample, and would likely encounter much more difficult problems to solve. In all probability, more questions have been raised than have been answered, and I have only gestured in the direction of where additional analysis might lead. Nonetheless, I hope that this study is illustrative of the type of rigorous, principled analysis rendered possible by an Optimality Theory approach to Descriptive Translation Studies.