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Phonological Mapping as Dynamic: The Evolving Contrastive Relationship between English and Korean*

David J. Silva
(The University of Texas at Arlington and Kyung Hee University)

Silva, David J. 2004. Phonological Mapping as Dynamic: The Evolving Contrastive Relationship between English and Korean. *Linguistic Research* 21, 57-74. Since the mid 1900's, many of the principles of contrastive analysis (CA) have established themselves as axiomatic in the development of foreign language teaching materials. Given this critical and pervasive role played by CA in foreign language pedagogy, teachers, researchers, and materials developers are encouraged to review the descriptive facts of both L1 and L2 periodically and incorporate any significant changes between the two languages into their work. In this paper, we illustrate the importance of continuing descriptive review and assessment by examining two recent changes in the pronunciation of standard Korean—the merger of the non-high front vowels and the change in laryngeal characteristics associated with the Korean stops—and argue that commonly assumed phonological relationships between Korean and English must be reevaluated, which may ultimately lead us to revise pronunciation-focused teaching and reference materials. **(The University of Texas at Arlington and Kyung Hee University)**

Keywords phonological mapping, dynamic, contrastive analysis, pronunciation of standard Korean, merger

1. Introduction

Growing out of second-language research conducted during the mid 1900's (e.g., Lado 1957, Corder 1967), contrastive analysis (along with error analysis) has proven a productive, practical, and enduring tool to aid in the creation of second- and foreign-language teaching methods and materials, particularly in the realm of the types of two-language, "bilateral" contexts for which contrastive analysis was developed.

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Contrastive approaches have long been part of contemporary approaches to the teaching of English as a foreign language in Korea. In espousing the central tenets of contrastive analysis—analyzing, comparing, and highlighting differences L1 and L2—members of the Korean TEFL community have developed materials and curricula that have helped more than a generation of Korean students learn English, a required subject at all levels in the Korean educational system. The component of the TEFL curriculum that is arguably most indebted to contrastive analysis perspectives is pronunciation: in teaching students about the oral production of English, instructional materials very often make direct reference to the ways in which consonants, vowels, and prosody of English compare to those found—or not found—in Korean. A survey of English-Korean children's dictionaries and workbooks at a major bookstore in Seoul reveals that many (but not all) of these texts provide pronunciation approximations written in Korean script, *hangeul*: 'bag' is consistently rendered 백 (where the English phoneme /æ/ is equated with Korean 애), 'bell' is rendered 벨 (with /□/ represented by 에), 'the' is rendered as 더 (pronounced in Korean as [t]/[d]), and

'cat' is rendered 캣 (with a final ㅅ /s/, as opposed to either ㅌ /t^h/ or ㄷ /t/). Putting aside any evaluation of whether such a strategy is either appropriate or effective (at least for the time being), we have ample evidence that explicit efforts to connect young Koreans' knowledge of their native language to English is an integral part of many (if not most) beginning-level EFL materials.

This sort of cross-linguistic, "L2 in terms of L1" advice to learners relies on a critical (but frequently unspoken) assumption of contrastive analysis: that the two linguistic systems under investigation are stable. Research in the field of sociolinguistics and historical linguistics, however, makes clear that all human languages are constantly in a state of change. Even standard language varieties, which are perhaps somewhat more resistant to the continual social pressures associated with linguistic variation in *all* speech communities, eventually yield to the inevitability of language change. As such, it is necessary that FL instructors and researchers occasionally reconsider the relationship between the relevant L1-L2 pairs and make adjustments to the corresponding methods and materials accordingly.

Having been presented with the notion that the L1-L2 relationship must be subjected to periodic review, those of us with a interests in the field of Korean EFL would be well advised to consider the recent changes in the phonological system of Korean (as

reported in works such as Silva 2002 and Silva to appear) and determine the extent to which these changes might influence the ways in which we use Korean-English contrastive analysis in the teaching of English pronunciation.[1] To this end, the current paper calls for revisiting two issues in Korean-English contrastive analysis: (a) the merger of the Korean front vowels ㅐ and ㅔ and (b) recently reported shifts in the phonetic realization of the plain and aspirated stop consonants (ㅂ ㄷ ㄱ vs. ㅍ ㅌ ㅋ). The discussion will seek to incorporate data from language variation studies into the contrastive analysis, and then consider the pedagogical implications of the same.

2. Contrastive Analysis of English and Korean Front Vowels

Initial analysis of the two languages' vowel system presents a clear asymmetry: for the most part, the Korean vowel system is a subset of the English System (Figure 1).

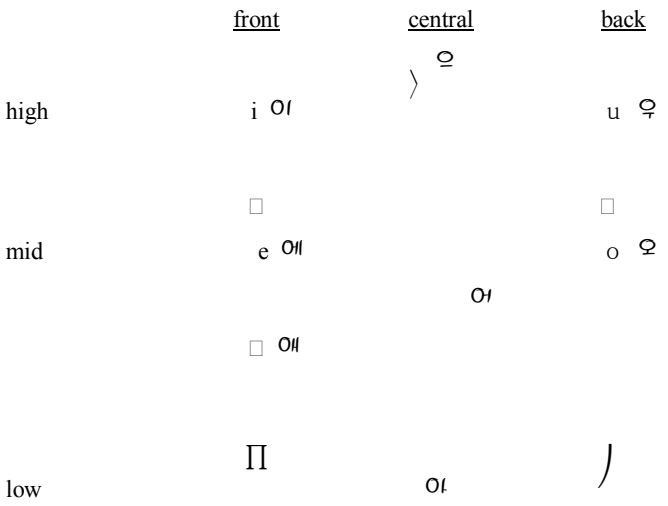


Figure 1: The English and Korean vowel systems. The Korean vowels, which are presented in *hangeul*, have been appropriately positioned in the vowel space. Note that Korean /ㅓ/ is further

[1] A more complete and balanced consideration of the Korean-English contrastive relationship would also investigate the ramifications of recent changes in English as well. As an English-speaking researcher with long-standing interests in Korean phonetics and phonology, I leave this task to my Korean colleagues with corresponding specializations in English.

front that English /ʌ/; Korean /ㅇㅓ/ exhibits variable pronunciation in the lower back-central region. English /ɝ/ is non-phonemic; high central Korean /ㅡ/ is, however, a phoneme.

Focusing attention on the front vowels, we find that while English exhibits five categories, Korean exhibits only three. In attempts to account for the larger number of English vowel sounds, Korean sources typically take advantage of the fact that in English, the tense vowels are diphthongized, thereby yielding the list of English-Korean correspondences found in (1). Tense English /i/ (typically produced by North American speakers as [i^{j}]), is rendered in *hangeul* as either "ㅇㅣ" or "ㅇㅣㅇㅣ" while English /e/ (realized as [e^{j}]) is rendered as "ㅇㅔㅇㅣ."

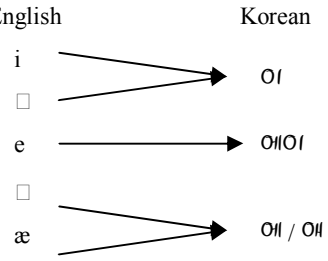
(1)

English		**Korean**	**Examples**
i	→	ㅇㅣ (ㅇㅣㅇㅣ)	치즈 'cheese'; 비치 'beach'
ɪ	→	ㅇㅣ	빅 'big'; 피크닉 'picnic'
e	→	ㅇㅔㅇㅣ	스테이크 'steak'; 게임 'game'
ɛ	→	ㅇㅔ	드레스 'dress'; 베드 'bed'
æ	→	ㅇㅐ	햄 'ham'; 랭킹 'ranking'; 백업하다 'to back-up'

While the mapping presented in (1) might appear reasonable, it presents at least two critical complications. First, the Korean representations have no viable means of capturing the tense-lax distinction found in English. Indeed, the use of Korean ㅇㅣㅇㅣ to represent tense English /i/ is not as common as it once was, thereby rendering the /i~ɪ/ distinction completely merged, represented by the single grapheme ㅇㅣ. Second, there has been a critical merger in contemporary Seoul Korean: the historically attested (and prescriptively ordained) distinction between ㅇㅐ (so-called "ㅇㅏ ㅇㅣ ㅇㅐ", for its shape, "ㅇㅏ"+"ㅇㅣ") and ㅇㅔ ("ㅇㅓ ㅇㅣ ㅇㅔ") has disappeared in all but the most emphatic, artificial speech (Choo and O'Grady 2003: 11-12). In the end, then, the phonological

mapping of front vowels from English to Korean results in the reduction of 5 segments to 3, as in (2).[2]

(2)



The reduction of phoneme categories is observable both in the phonetic realization of English loanwords in Korean and in the phonetic realization of the English pronunciation of Korean EFL students. In the former case, one would fully anticipate the five-to-three reduction to persist; we believe—and, indeed, expect—loan words to fully adapt to the host language phonology. In the latter case, however, one might anticipate that Korean EFL students would increasingly approximate more English-like pronunciations, thereby exhibiting evidence of developing TL competence. Such patterns are corroborated in recent research by Kim (2004) and Kim and Silva (2003): Korean EFL students are reported to begin their English-speaking careers with only three front vowels, but with 5 or more years of regular exposure to English, eventually succeed in differentiating the tense and lax variants of the high vowel, /i/ vs. /□/ (Figure 2). However, there is far less success in attaining English-like proficiency when it comes to producing a clear distinction between /□/ and /æ/ (Kim 2004).

Further exacerbating difficulties in Korean EFL is the use of what have become standard contrastive presentations of the two languages' vowel systems, as in (1). Although providing Korean English learners with Korean correspondents to the target English sounds is intended to help, one might argue that in the long run, such comparisons do more harm than good. While English /i/ is *similar* to Korean 이, 이이,

[2] Here we must distinguish between "phonological" and "orthographic" in that English phonemic /æ/ is consistently written in Korean using 애, despite the fact that 애 is no longer phonetically distinct from 에. Given this strategy, English minimal pairs such as *bed* and *bad* would be spelled differently in Korean (베드 and 배드, respectively), but would be indistinguishable when spoken by a Korean. (See also Choo and O'Grady 2003:12.)

or 이:, English /i/ is, in fact, none of these. Moreover, English / / is not much like

Korean 이, save for the fact that both are high front and unrounded.

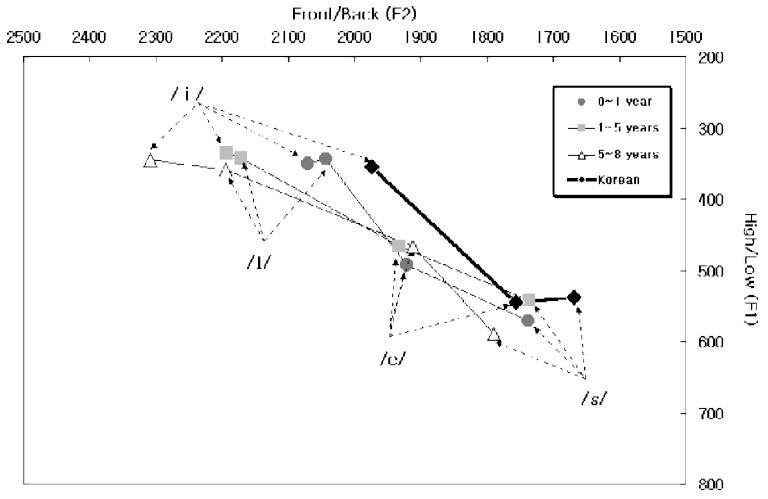


Figure 2. Progressive Differentiation among Non-Low Front Vowels by Korean EFL Speakers (Kim & Silva 2003). Note that speakers resident in the USA for more than 5 years show a difference between /i/ and / /, while speakers with less experience in the USA do not.

In addition, appeals to have Korean students equate English /ɛ/ with Korean 에 and English / / with Korean 에 are downright misleading: it is unreasonable to encourage

Korean speakers to rely upon a native-language distinction that no longer exists. The news associated with the pairings in (1) is not all bad, though: equating English /e/ with Korean 에이 is a *useful* contrastive pairing, as 에이 successfully captures the diphthongal nature of the corresponding target language segment.

All told, long-standing assumptions about the ways in which we might help students use their knowledge of the Korean vowel system to assist in their acquisition of English vowels need to be re-examined, and the corresponding teaching and reference materials need to be updated appropriately.

3. Contrastive Analysis of English and Korean Stops

In shifting our attention to the relationships between Korean and English stops consonants, we begin by considering the data in Figure 3, which presents both systems in a single space. As we see in Figure 3, Korean lacks a voicing distinction while English lacks distinctions on the basis of aspiration (represented by the feature "sg", "spread glottis") and tension / reinforcement (represented by the feature "cg", "constricted glottis"). It would further appear that the most straightforward set of bilateral contrastive correspondences would be those appearing in the shaded boxes: in the case of the stops, the Korean voiceless lax segments correspond to the voiceless stops of English.

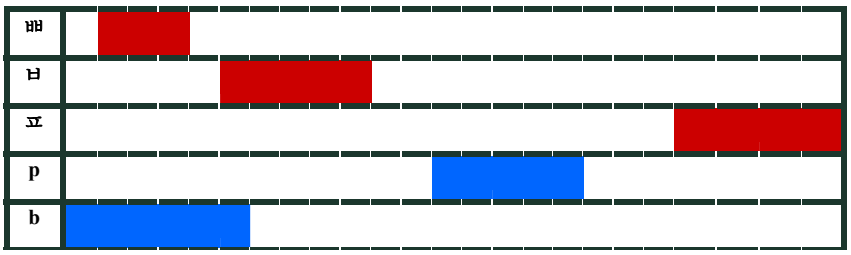
		labial	labio-dental	inter-dental	alveolar	alveo-palatal	velar	glottal
oral stops and affricates	*-vc*	p ㅂ			t ㄷ	□ ㅈ	k ㄱ	
	+vc	b			d	□	g	
	+sg	ㅍ			ㅌ	ㅊ	ㅋ	
	+cg	ㅃ			ㄸ	ㅉ	ㄲ	
fricatives	*-vc*		f	θ	s ㅅ	∪		
	+vc		v	ð	z	□		
	+sg							h ㅎ
	+cg				ㅆ			
nasals	*+vc*	m ㅁ			n ㄴ		ŋ ㅇ	
liquids	*flap*				□ ㄹ			
	lateral				l			

Figure 3. A Comparison of English and Korean Consonants. The segments in shaded squares represent those segments that are phonemic correspondents.

If, however, we consider the acoustic facts associated with the relevant stops in both languages, we find that the phonemic correspondences are a bit more complex than the data in Figure 3 would suggest. The earliest work in the area of Korean phonetics (e.g., Lisker and Abramson 1964; C-W Kim 1965; Han and Weitzman 1965, 1967) indicates that in word-initial / phrase-initial position:

- the tense (reinforced) stops of Korean are voiceless and relatively unaspirated (with a Voice Onset Time [VOT] ranging from about 0 to 20 ms),
- the plain (lax) stops are voiceless and lightly aspirated (with VOTs ranging from about 30 to 80 ms), and
- the aspirated stops are voiceless and heavily aspirated (with VOTs well over 85 ms).[3]

When we compare the Korean values for VOT with those attested for English stops, we find that English /b/, with its small VOT values, best corresponds with the VOT regions associated with the Korean tense and lax stops, while the VOT values for English /p/ more closely align with those of the Korean aspirated stops—though the English values are noticeably shorter (Figure 4).[4]



[3] In word-internal position, the VOT values for each stop type are significantly reduced. Moreover, the plain (lax) stops are frequently observed to take on the characteristics associated with voiced stops: no significant post-release aspiration and the presence of voicing during stop closure. In this paper, we will limit our investigation to phrase-initial segments.

[4] The data in Figure 4 do not take into account the fact that for certain speakers of English, word-initial voiced stops are, in fact, truly voiced: they exhibit what has been termed "negative VOT," which corresponds to an onset of voicing prior to stop release. Given that Korean does not allow for voiced obstruents in word-initial position, these (pre-)voiced variants of English /b d g/ would have no clear Korean correspondent.

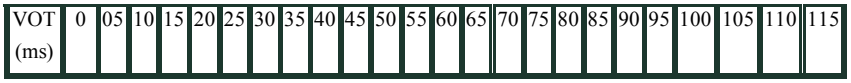


Figure 4. VOT Ranges for Korean and English Stops. Based on phonetic data collected during the 1960's and 1970's, the shaded VOT ranges for Korean reinforced and lax stops (represented above by ㅃ and ㅂ) overlap most with the VOT range associated with English voiced stops (represented by /b/). The VOT range for the Korean aspirated stops (represented by /ㅍ/) is most closely aligned with that of the English voiceless series (/p/), though the Korean segments are much more heavily aspirated. (Based on data summarized in Silva 2002.)

The phonetic data represented in Figure 4 prompt a reconsideration of the phonemically-driven correspondences presented in Figure 3. When attempting to develop a contrastive analysis account based on the phonetic facts, we find that the English voiceless stops /p t k/, with their moderate aspiration, best correspond to the Korean aspirated series (ㅍㅌㅋ). This correspondence is further affirmed by the fact that in word-internal intervocalic position, neither the English voiceless nor the Korean stops aspirated stops acquire voicing. In contrast, the English voiced stops /b d g/ might be rendered in Korean by either the lax (ㅂㄷㄱ) or tense (ㅃㄸㄲ) series.[5] These phonetic relationships between English and Korean are nicely reflected in the most recent (year 2000) official Romanization promulgated by the Korean Ministry of Culture and Tourism, as attested to in the following Korean place names:

(3)

부산	Busan		포항	Pohang
대구	Daegu		태백	Taebaek
경기	Gyeonggi			

How, then, might me reconcile the phonological correspondences (Figure 3) with the somewhat different phonetic correspondences (Figure 4)? Looking at phonetically-based phonological features provides the necessary link. In English, we can argue that for the voiceless stops, the primary feature is [-voiced], with a secondary, redundant characterization made by [+spread glottis]. For the English voiced stops, the primary feature is [+voiced], with [-spread glottis] functioning as a secondary specification. In looking to establish a working contrastive relationship with English, Korean fails to recognize the primary distinguishing features of English,

[5] We will have more to say about the choice between lax or tense below. For the time being, let us assume that Occam's Razor encourages the choice of the lax stops as they are the least marked, both cross-linguistically and language-internally.

as Korean does not use the feature [voiced] phonemically. Rather, Korean adopts English's secondary features as primary:

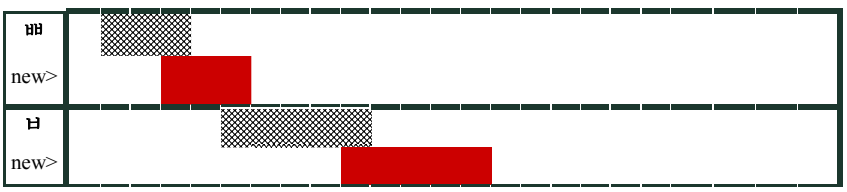
(4)		primary	secondary		Korean Mapping
	English /p t k/	[-voiced]	[+spread gl]	>	[+spread gl] : ㅍㅌㅋ
	English /b d g/	[+voiced]	[-spread gl]	>	[- spread gl] : ㅂㄷㄱ

An alternative account for the English data (à la Iverson and Salmons 1995) would hold that in English, the relevant primary featural specification is, in fact, aspiration (here, [±spread glottis]). Under such an analysis, the English-to-Korean mapping is all the more straightforward: aspirated stops map directly to aspirated stops.

Recently observed shifts in the phonetic characteristics of the Korean stop consonants put us in a position to review the contrastive relationships posited above. As initially alluded to in Silva 1992, and further confirmed in Silva 2002 and Silva, Choi and Kim 2004, there is evidence that the mean VOT values for all three Korean stop types has changed since the 1960s. More specifically, the average VOT value for both reinforced and plain stops has increased (more so in the latter case), while average VOT for aspirated stops has decreased. These recent changes are schematized in Figure 5; for details, see Silva 2002.

A critical detail that is lost in Figure 5 is the fact that for some young speakers of standard Korean, there has been a merger of the VOT values associated with the plain and aspirated stops: for these speakers, aspiration no longer differentiates these two types. Such observations further support the notion that either the lax or the aspirated Korean series can be reasonable correspondents to the English voiceless stops.

With this new information arises a critical complication to the phonetically-driven correspondences put forth in (4). The more recent data suggest that either the plain or aspirated segments of Korean could be used as correspondents to the voiceless stops of English—at least in word-initial position. Consequently, the voiced stops of English are more clearly aligned with Korean's reinforced series.



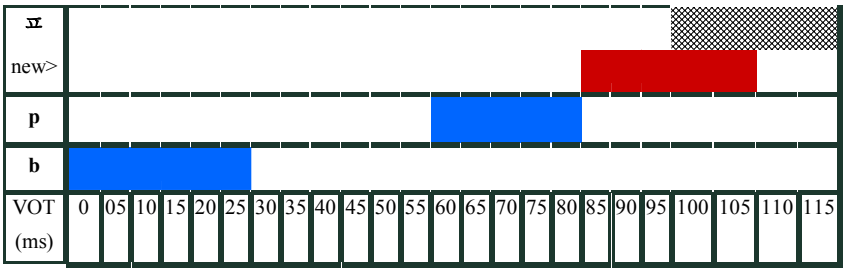


Figure 5. Changes in VOT Ranges for Korean and English Stops. Based on phonetic data collected during the 1980's and 1990's, VOT ranges for Korean reinforced and lax stops have increased, which the VOT range for the Korean aspirated stops has decreased. This change in Korean results in a realignment of the Korean and English stop categories, such that Korean reinforced stops correspond most to English voiced stops (ㅃ ~ b) while Korean lax and aspirated stops approximate the VOT range associated with English voiceless stops (ㅂ/ㅍ ~ p). (Based on data summarized in Silva 2002; ranges for the "new" data appear below those for the "old" data.)

(6)

English Phoneme	Standard View (Fig 4) Korean Correspondent	Revised View (Fig 5) Korean Correspondent
p t k	ㅍ ㅌ ㅋ	ㅍ ㅌ ㅋ *or* ㅂ ㄷ ㄱ
b d g	ㅂ ㄷ ㄱ *or* ㅃ ㄸ ㄲ	ㅃ ㄸ ㄲ

What appears to have changed in the past 40 so years? Most apparent is the role played by the Korean lax series: it is argued here that these segments, ㅂㄷㄱ, are now more appropriate aligned with the voiceless stops of English. Alas, this putative re-alignment is complicated by the fact in word-internal intervocalic position, the lax stops—even with their increased word-initial mean VOT values—continue to behave in a voiced manner.

There is also an expanding body of compelling evidence suggesting that factors beyond VOT—including, but not limited to, the fundamental frequency of the vowel following a lax, aspirated or tense Korean stop—play a critical role in how phonemic categories are phonetically mapped in standard Korean (M-R Kim 2000; Silva 1998, 2002; Silva, Choi and Kim 2004) and, more recently, how these mappings influence the L2 English production of Korean native speakers (Kim and Park 2001). Such "migration" of consonantal features onto adjacent vowels is by no means new; witness the fact that syllable-final voicing in English is most discernibly signaled by the length of the preceding vowel (bed [b□:t□] vs. *bet* [b□t□]). The need for further

pursuing revisions to the contrastive relationship between Korean and English grows all the more undeniable.

The need for a sustained, continual Korean-English research effort notwithstanding, allow us to focus on the VOT data presented above and suggest that the most transparent English-to-Korean mapping would be the following:

(7)	English	→	Korean	
	p t k		ㅍ ㅌ ㅋ	(aspirated series)
	b d g		ㅃ ㄸ ㄲ	(reinforced series)

Perhaps most uncomfortable about the scheme put forth in (7) is the thought that the least marked series in Korean—plain/lax ㅂ ㄷ ㄱ—plays no role in formalizing the relevant details of the English-Korean contrastive relationship. All the same, given the fact that the plain stops are the least stable group of segments, in terms of both their diachronic shifts and their positional variants (recall that they are voiced intervocalically), it stands to reason that they might, in fact, be the best choice to be left out of the analysis.

This potentially controversial decision regarding the (non-)status of the lax stops finds a certain degree of support when one considers the ramifications of the documented VOT shifts. Consider, for example, how a form such as 버스 /p s□/ 'bus' would be "back-mapped" into English from Korean. Among older speakers, for whom the initial segment would manifest a moderate amount of aspiration, the phonetic realization would be more along the lines of [p s□], a reasonable reflex of the corresponding English form, 'bus'. For many younger speakers, however, the phonetic realization of 버스 would be closer to [p□ s□] (similar to, and even overlapping with, *hangeul* 퍼스), a form phonetically more similar to English 'pus'. Similar age-based differences would be predicted in forms such as 그리스 ('Greece' for older speakers but 'crease' for many younger speakers) and 지프 ('jeep' for older

speakers vs. 'cheap' for younger ones). Predictions of this sort merit empirical verification.

In the meantime, can one find any precedent for similar shifts in the voicing-aspiration relationship between English and Korean? Yes. Examination of dictionaries and newspapers (in this case, the 민중서림 *New Little Dictionary* and the 동아일보 *Dong-A Daily*, respectively) yields some tantalizing bits of evidence for changing orthographic norms. As we seen in (8), borrowed words once spelled using Korean's reinforced / tense obstruents (corresponding to English voiced segments) have more recently been spelled using the graphemes for the Korean plain obstruents.

(8)	뻐스 뻐스	1963 1971	>	버스	1970	'bus'
	땐스	1971	>	댄스	1981	'dance'
	째즈	1970	>	재즈	1983	'jazz'
	까스	1963	>	가스	1970	'gas'

If, in fact, the observed upward shift in the VOT values for the Korean lax stops proves robust, and if, in fact, VOT values eventually render themselves an ineffective differentiator for the lax-vs.-aspirated distinction, then current orthographic forms such as 그리스 and 지프 (for 'Greece' and 'jeep') might benefit from a change to the sort of "old-fashioned" forms arrayed on the left side of (8): 'Greece' as 끄리스 and 'jeep' as 찌프, etc. Moreover, pedagogical materials that explicitly reference the contrastive relationship between the Korean and English stop systems would need appropriate revision.

4. Pedagogical Reflections

Having surveyed the changing relationship between English and Korean, and having made observations with regard to the implications that these changes might have on the way Korean speakers produce English forms—both when speaking English as a foreign language and when incorporating English lexical items in to Korean—let us consider some broader pedagogical reflections.

Perhaps most important among these reflections is this: when teaching English, particularly English pronunciation, one must take not to over-rely on Korean forms. As mentioned above, it is common for beginning-level EFL materials to include pronunciation guides that allow learners to draw parallels between Korean and English. For example, the workbook entitled 매직 피닉스 원 / *Magic Phonics 1* provides contrasts between the non-high front vowels of English by juxtaposing hangeulized forms such as 캔 'can' and 백 'bag' with 텐 'ten' and 헨 'hen' (p. 3). The 어린이 영어 그림 사전 (*Children's English Picture Dictionary*) includes an initial pronunciation guide that lists the following correspondences in both *hangeul* and a what appears to be a simplified version of the International Phonetic Alphabet (p. 12):

(9)	æ	애	bag	[bæg 백]
	e	에	egg	[eg 에그]

Elsewhere in this dictionary, however, individual lexical entries are rendered only in their English orthographic forms and in corresponding *hangeul*-based pronunciation guides. Still other materials present their readers with both *hangeul* and IPA (or IPA-like) versions of each English entry, e.g. the 현대 초등 영어 사전 (*Hyundae Elementary School English Dictionary*) and 영어단어 365 (*English Vocabulary 365*). While the intent behind using *hangeul*-based forms to help Korean students acquire English is understandable at its base, cases such those illustrated in (9) must ultimately be adjudicated as ineffective and, perhaps, even misleading: given the merger of Korean 애 and 에, it is disingenuous to promote such correspondences as representing viable points of cross-linguistic facilitation (e.g., cases of positive transfer). They are not—at least for all but the most prescriptively inclined speakers of modern standard Korean.[6]

[6] As alluded to above, however, orthographically differentiating the original source vowels in English loanwords has become standard practice in Korean. In Korean words borrowed from English, the so-called "short a" of English consistently appears as 애 (e.g., 애플 'apple', 매드 'mat', 백 'bag', 케익랜드 'Cakeland' – a bakery name) while English "short e" appears as 에 (e.g., 메즈 '(N.Y.) Mets', 베드 'bed', 세트 'set' – used to describe a combination meal at fast food restaurants). It is important to recognize that while related, orthographic policies within Korean (as they concern the adaptation of loan words) must be differentiated from pedagogical policies pertaining to Korean EFL. In each case, the status of the language involved, the role of the language user/learner, and the function played by *hangeul* are all subtly different.

While making explicit connections between the two languages can provide valuable insights for students, teacher must reinforce the notion that Korean forms can only approximate their English counterparts. As such, teachers should also discourage students from taking literally any Korean-based transcriptions found in textbooks and dictionaries. For their part, the developers of Korean EFL reference works should seriously consider the extent to which they should incorporate hangeulized English forms into their texts. Some might argue that the use of such Korean "pronunciation keys" are especially useful (one might even say necessary) for younger learners, who are themselves struggling with the task of learning Roman script and English orthography. The counterargument, however, rests on the Korean proverb that reads 시작이 반이다 (best rendered in English as "Well begun is well done"): by claiming (or at least *implying*) that such *hangeul*-based pronunciation guides are reasonable renderings of native-like pronunciations, we encourage and reinforce non-autonomous, non-native EFL pronunciation production from a very early age.[7]

Pursing this line of reasoning further, one finds additional strength for a long-held belief: that exposing (Korean) EFL students to native speaker output is imperative to fostering success in the realm of pronunciation. It perhaps goes without saying that beginning English-language education at the earliest practicable point will most likely lead to the greatest long-term benefits for students. Indeed, decisions to shift the onset of English language education from middle school to elementary school are likely to have positive effects on the English language proficiency of future Korean students. In addition, the more increased incorporation of audio resources into workbooks and dictionaries (in the form of tapes, CD-ROMs, and dedicated websites) is certainly another positive development: providing young learners with authentic voices should have salutary effects on the degree to which younger Koreans acquire more native-like English pronunciation. That said, however, such resources are of limited use unless they can operate in ways that are (inter-)active. For most Korean students, their most visible (and audible) sources of English language input and input are their English language teachers, the majority of whom are not themselves native speakers. And while many well-meaning English teachers in Korea will admit that they have

[7] One might raise a parallel question regarding the use of IPA style guides in materials developed for such young learners. Is it reasonable to expect that any 6 or 7 year old child has the developmental skills to acquire and use a text-based abstraction such as the International Phonetic Alphabet—especially one rendered in a variation of the L2 script that is the target language? Though I suspect that the answer to this question is "no," I have no empirical basis for such an assessment. I leave inquiry into such questions to my colleagues in the fields of developmental and educational linguistics.

reasonable control over English vocabulary and grammar, they often confess that their oral-aural proficiency is far less developed.[8] Yet they persevere, endeavoring to provide the best education possible for their students. For these students, early exposure to non-native phonological models of English is better than no exposure, but is also of limited long-term benefit: cognitively primed for acquiring the phonological and phonetic details of language, these students must be actively engaged by native speakers on as regular a basis as possible. In doing so, we can attempt to reduce the need for post-hoc "accent reduction" efforts, so frequently requested by adult Korean speakers of English as a foreign language.

5. Conclusion

Meaningful contrastive analysis critically depends on accurate descriptions of the two grammars under investigation and subsequent critical assessments of the contrastive relationship. Given that human languages are inherently organic systems, linguistic theory and praxis that have been developed by means of a contrastive approach must take into account language change, lest the methods and materials grow stale and ineffective. To this end, language professionals working in a range of disciplines—second language acquisition, foreign language teaching, descriptive / field linguistics, and linguistic theory—must strive to work collaboratively. By constantly re-informing each other recent developments in our respective sub-fields of linguistics, we will be better equipped to meet two shared goals: better understanding the relevant grammatical systems and—in the context of teaching English as a foreign language—parlaying our knowledge (and perhaps, even wisdom) into efforts that ultimately benefit our most important constituents, our students.

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[8] This asymmetry is understandable, given Korea's traditional EFL educational scheme (with its focus on reading comprehension) and Korean teachers' limited opportunities for significant long-term travel and study abroad. As Korea participates more actively in the international arena, however, the number of Koreans with substantial living experience in the Anglophone world is increasing. The extent to which these more fully bilingual Korean-English speakers assume a role in Korean EFL education—as opposed to pursuing more lucrative positions in which their control of English is a tremendous asset—remains to be seen.

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David J. Silva
Department of Linguistics and TESOL
The University of Texas at Arlington
UTA Box 19559 – Hammond Hall 403
Arlington, TX 76019-0559 USA
E-mail: david@uta.edu; http://ling.uta.edu/~david

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