THIRD PERSON INDICATIVE /-s/:
CONSTRAINTS ON SECOND LANGUAGE ACQUISITION
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Introduction: Problems with /-s/

The third person indicative /-s/ is generally viewed as a basic introductory concept for second language (L2) learners of English. It can be found at the beginning of almost any first year grammar text (Molinsky & Bliss, 1983; Azar, 1985; Elbaum, 1986) along with a straightforward explanation of its use. The concept of /-s/ is both understandable and teachable, and the first few days of beginning level instruction are often filled with a variety of exercises, games, and communicative activities for first year students. Stephen Krashen (1982:17) labels the third person /-s/ as one of the "easy" forms, and most teachers would probably agree; it is considered so "easy" that, after those first few days, /-s/ is seldom the focus of any lesson again. It is clear to teachers of English as a Second Language (ESL), however, that few students actually seem to apply this simple concept consistently. Elaine Tarone agrees, noting that omission of this morpheme "continues to occur even in the production of advanced learners" (1988:97). Problems with /-s/ might be expected in natural speech and free writing, but teachers are often perplexed when students fail to use /-s/ even after careful editing. Even more perplexing are students who will omit /-s/ while reading aloud; the /-s/ here seemingly requires nothing more than pronunciation of the printed letter.

Researchers, ESL teachers, and students seem to agree that the rule of third person indicative /-s/ is simple, and the form is readily available in the language environment. What then is causing variability in the use of third person indicative /-s/? I suggest that acquisition of third person /-s/ is not as "easy" as most believe. I propose that semantic and syntactic complexity in the context of general /-s/ and constraints in phonology, perhaps those dealing with universals, can inhibit complete acquisition for many L2 learners of English.

Meaning and Syntax: Complexities of /-s/

Brown's (1973) study of Adam, Eve, and Sarah acquiring English as a first language was one of the first to provide a rank order of morphemes acquired in children. Dulay and Burt (1980) followed by investigating eight of these ordered morphemes for Spanish speaking children and found a similar order. Of the eight morphemes investigated by Dulay and Burt, six were concerned with the use of /-s/: contractible copula ('s), plural (-s), contractible auxiliary ('s), possessive ('s), third person (-s), and long plural (-s). Although Dulay and Burt were concerned with the acquisition order of these morphemes and not semantics or syntax, their list points out the frequency and varieties of /-s/ encountered by L2 children in the initial stages of language acquisition. For L2 adults who are confronted with complex language input every day, the task of sorting out the above uses of /-s/ and other English morphemes must seem enormous.

In examining short plural /-s/, for example, we can see that the L2 learners must learn certain syntactic and semantic constraints; short plural /-s/ must attach to the end of a noun, and /-s/ denotes plurality of that noun. Examining possessive /'s/ next to this, we see that it also attaches to the end of a noun, but it can denote plural or singular possession of the following noun. When the contractible copula /'s/ is acquired, the learner has to store this morpheme with similar formation rules to the above two, but the /'s/ here represents a reduction of a whole word, the copula *is*, and may be followed by adjectives, nouns, or prepositional phrases which describe the noun that the /'s/ has been attached to . Sometime during or after the acquisition of the above morphemes, the third person indicative /-s/ is acquired (see discussion below). This use of /-s/ conflicts with the above uses in some important ways; it attaches only to verbs, and it denotes only singular to match a

third person singular subject. From the above examples, we can begin to see that the "easy" third person indicative /-s/ is hardly that when put in the context of just a few of the other conflicting uses of /-s/ in English. To adult L2 learners of English, /-s/ seems to attach to nouns or verbs, denote plural, plural or singular, or singular, and be contextually related to constituents of either the noun or the verb phrase.

Even if the /-s/ morphemes are not sequenced, but clustered in hierarchical groups as Dulay and Burt propose, the L2 learners are still faced with conflicts between and within acquired clusters (1980:356). Learners of English will eventually sort out the various uses for general /-s/ and even continue to add others not covered in Dulay and Burt's study, that is, the contractible auxiliary /'s / of third person auxiliary *has* + /-en/ and the contractible auxiliary /'s/ of third person indicative passive constructions. First language learners eventually acquire and use /-s/ without difficulty, but as noted earlier (Tarone, 1988:97), even very advanced L2 learners will still omit them at times. Semantic and syntactic complexity may account for some omissions of the various uses of /-s/, but it cannot account for variability within the use of one of these, namely the third person indicative. Perhaps some aspects of the phonology of /-s/ may be able to account for this kind of variability.

Phonology: Constraints on /-s/

The continued variability of third person indicative /-s/ in L2 production of English may be related to phonological constraints concerned with the reduction of word-final consonant clusters and the influence of the sonority hierarchy.

Fred Eckman collected and examined data concerning production of final consonant clusters of English spoken by native speakers of an L1 which does not allow these clusters (1987:144). In his study, he draws on universal generalizations (1987:151-52; from Greenberg, 1978) as the basis for proposing the following optional cluster reduction rule in (1)(=Eckman's [7]). Eckman admits that the rule as stated does not predict which consonant is deleted and adds a markedness constraint, in (2).

(1) *Cluster Reduction* (CR) (optional)
C C (C) # → C (C) #
Optionally delete one member of a first tri-literal consonant cluster; optionally delete one member of a final bi-literal consonant cluster. (1987:152)

(2) *Marked Cluster Constraint* (MCC)
Given the set CC_i, which contains all logically-possible bi-literal clusters obtainable by applying CR to a final tri-literal cluster, a cluster CC_j, which is a member of CC_i, will be an output of CR only if CC_j is not more marked relative to the other members of CC_i. (1987:154)

He found, however, that several forms produced by the L2 learners of English violated the MCC; among the forms were final clusters of stop-stop-fricative reduced to stop-stop, as in the following examples of third person indicative /-s/, in (3).

(3)
accepts	/aksɛpts/ → /aksɛpt/
acts	/ækts/ → /ækt/

Although Eckman is concerned with a much larger issue than this in his study, his comments are pertinent since they focus on /-s/ as a morpheme. When L2 speakers of English were given a list of words to pronounce, Eckman reports that the final cluster was reduced to stop-stop, and it "almost invariably involve[d] the deletion of a final fricative; that is either the plural or third person marker." (See Appendix A.) He further states that

"there are no instances in which a stop-stop cluster is produced by deleting /s/ where it is not a morpheme" (1987:154). Native speakers, however, do not reduce consonant clusters in this way; Eckman reports, for example, that the L1 English speakers may reduce *opts* /apts/ to [aps] where the stop is deleted but the fricative would be retained and the morpheme kept intact.

This brings us to the interesting conclusion that there is something about the very nature of /-s/ as a morpheme which will act to preserve /-s/ in the first language but delete it in L2 English. Only when /-s/ is a morpheme, such as the third person indicative /-s/ in Eckman's study, will L2 learners delete it and thus violate Eckman's proposed rules for reduction and markedness. Eckman is careful to describe his CR rule as optional and his markedness constraints as only tendencies in interlanguage (IL), but if they do operate as he claims in this study, then, we see that the deletion of /-s/ by L2 learners of English violates Eckman's CR rule and markedness constraints. According to Eckman, the L2 speakers should preserve it. Why are they so eager to delete it? The answer does not seem to lie within Eckman's study of consonant reduction and markedness constraints, but perhaps phonology of third person indicative /-s/ with regard to the sonority hierarchy might provide more insights into his data.

As seen above, L2 learners of English will allow final consonant clusters even though their languages may not, but they seem to violate Eckman's proposed universal constraints by deleting third person indicative /-s/. A study by Herbert Tropf (1987) might provide some reasons for these deletions. Tropf proposes that the sonority hierarchy may influence consonant clusters and syllable structure; his summary of the sonority hierarchy follows in (5) and is depicted in (6).

(5)   Each syllable has a peak, mostly a vowel. If additional segments are present at the beginning of the end of the syllable, then they have a tendency to be ordered in such a way that the sonority declines from the syllable peak to the peripheral segments. (Tropf, 1987:175; cf. Hooper, 1976; Kiparsky, 1979; Selkirk, 1984)

(6)   *Sonority Hierarchy* (Tropf, 1987:176):

C	C	N	L	G	V	G	L	N	C	C
plosive	fricative	nasal	liquid	glide	vowel	glide	liquid	nasal	fricative	plosive

(less sonorous) ◄-------------- (most sonorous) ----------------► (less sonorous)

In a study of Spanish L1 learning German as an L2, Tropf investigated whether sonority affects the L2 phonological acquisition and if this can explain "certain `free´ variants which cannot be explained through [native language] or [target language] restrictions" (1987:177). Since Tropf's study does not investigate English as an L2, third person indicative /-s/ is not addressed directly. However, from Tropf's demonstration that the sonority hierarchy contributes to variability in consonant clusters, we can infer similar effects on consonant clusters in English.

With regard to omission of syllable final consonants, Tropf reports that "the more sonorant a final target consonant, the more likely it is realized as a (possibly deviant) variable in the IL, but not omitted ... a similar observation holds for final target clusters" (1987:188). Given this information, we can return to the data from Eckman's study and examine examples from those data which contain final clusters formed from adding third person indicative /-s/. Eckman's list contains almost thirty third person indicative verbs, six of which are listed in (7)(taken from Appendix A), representing each of the final consonant clusters involved. In each case, the sonority hierarchy is violated in the final consonant

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cluster by addition of the fricative morpheme /-s/.

(7)

claps	C	G	V	C	C
	stop	glide	vowel	stop	fricative
eats	V	C	C		
	vowel	stop	fricative		
cooks	C	V	C	C	
	stop	vowel	stop	fricative	
asks	V	C	C	C	
	vowel	fricative	stop	fricative	
tests	C	V	C	C	C
	stop	vowel	fricative	stop	fricative
acts	V	C	C	C	
	vowel	stop	stop	fricative	
sifts	C	V	C	C	C
	fricative	vowel	fricative	stop	fricative
accepts	C	V	C	C	C
	fricative	vowel	stop	stop	fricative

Considering Eckman's data in light of Tropf's study, it becomes clear that there is a tendency for these L2 learners of English to omit /-s/ when it violates the sonority hierarchy, thereby overriding Eckman's consonant reduction and markedness constraints. If the sonority hierarchy is a universal, then it would seem to be a powerful constraint which can act to inhibit complete acquisition of third person indicative /-s/ for many L2 learners of English. This may answer the original question concerning the variability of the third person indicative /-s/ by even advanced L2 learners; they may delete third person indicative /-s/ when it violates the sonority hierarchy, but retain it when it does not.

Conclusion: A proposed study of /-s/
    The above claim is obviously open to empirical investigation. After L2 learners of English have sorted out the semantic and syntactic complexities of general /-s/ in English and begin to use third person indicative /-s/, we can investigate the variability of this morpheme in a variety of language functions. Through free writing and editing, reading aloud, and natural speech we can examine learners' omissions of /-s/ from final consonant clusters in relation to the sonority hierarchy. If we find that /-s/ is retained in vowel final verbs, for example, but deleted after stops, we may be able to explain the variability in terms of sonority constraints. As Tropf pointed out in his investigation of an interlanguage, variations which are not explained by the function or by the native or target language may show that "a universal factor is operative" (1987:174-175). If we can demonstrate that the sonority hierarchy operates to inhibit productions of third person indicative /-s/, then this "easy" rule in English could be under a powerful universal constraint; the inherent tendency of /-s/ to violate a possible universal such as the sonority hierarchy can make third person indicative /-s/ one of the most difficult things for many adult L2 learners of English to acquire.

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WORD LIST
Final Clusters
(Eckman, 1987:160)

st		sts		ts
test	erased	costs		eats
nest	released	tests		cats
post	passed	nests		puts
dust	missed	posts		sits
cost	bussed	sits		abets

sk	sks	ks		kst
ask	husks	box	backs	taxed
bask	asks	tax	tucks	mixed
husk	basks	fix	books	boxed
mask	tusks	wax	packs	waxed
tusk	masks	mix	cooks	fixed
				text
				context
				next

skt	kt			kts
masked	duct	tucked		acts
asked	fact	packed		facts
tusked	pact	backed		ducts
basked	act	booked		pacts
husked	sect	cooked		sects

sp	sps	spt		pst
clasp	grasps	lisped		eclipsed
rasp	clasps	gasped		relapsed
gasp	rasps	rasped		elapsed
lisp	gasps	grasped	.	collapsed
grasp	lisps	clasped		lapsed

ps		pt		pts
perhaps	rips	opt	ripped	opts
lapse	claps	adopt	gapped	adepts
eclipse	grips	sept	gripped	adopts
elapse	laps	accept	lapped	accepts
collapse	gaps	adept	clapped	septs

	ft		fts	
	tuft		gifts	
	gift		rafts	
	haft		sifts	
	sift		tufts	
	raft		hafts	