

CHAPTER 8

A new methodology for the study of aspect in contact

Past and progressive in Indian English

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8.1 Introduction

The term 'aspect' applies to two distinct, but related, notions. Semantically, it pertains to the type of eventuality or *Aktionsart* denoted by a predicate, whether simple or modified by further operators (lexical aspect). Grammatically, it denotes particular, often obligatory, morphology in the verbal complex that has implications for the resulting *Aktionsart* of the clause (grammatical aspect). One view (e.g. Smith 1991) treats lexical and grammatical aspect as fundamentally distinct, with categories of lexical aspect (e.g. state, activity, accomplishment, achievement) forming a typology of real-world situations, and grammatical aspect encoding temporal perspectives on those situations taken by the speaker. Another view (e.g. de Swart 1998) treats aspect uniformly across syntactic levels in terms of the semantic properties of homogeneity and quantization; any predication may have these properties regardless of whether it is simplex (lexical) or affected by further operations such as grammatical aspect morphology (derived). On this view, aspect is built compositionally, starting with the initial eventuality or *Aktionsart* denoted by a predicate and taking into account additional aspectual operators (e.g. aspect morphology, adverbials) that may shift the aspectual class of the predicate.

The first of these perspectives has dominated the study of tense-aspect in studies of L1 and L2 learning. This approach, which we term the Lexical Aspect Hypothesis (LAH), proposes that lexical aspect strongly influences early stages of a learner's use of tense-aspect morphology. This study aims to redress the focus on lexical aspect in second language acquisition (SLA) by proposing a new methodology based on the second approach outlined above. This view, which we term the Sentential Aspect Hypothesis (SAH), involves examining not only

lexical but also sentential aspect, taking into account the impact of aspectual operators above the VP.

As Indo-Aryan languages belong to a typological class that marks sentential (im)perfectivity, Indian English constitutes an ideal test case to examine whether L2 English retains sentence-level aspectual sensitivity from the L1 or reverts to universal semantic primitives of lexical aspect, as predicted in many SLA studies. Assessing these competing hypotheses for past and progressive morphology in Indian English, we find extensive support for the SAH. Unlike the universalist LAH, the SAH allows for robust L1 and L2 influences in aspectual restructuring, as anticipated in situations of contact. Because previous LAH studies focused on the VP, we suggest further that they may have only identified part of the aspectual sensitivity of learners, and some of their conclusions regarding lexical aspect may have been premature.

8.2 Approaches to aspect in contact settings

8.2.1 The lexical aspect approach

As summarized in Table 8.1 (see also Table 1.1), Vendler (1967) originally proposed a four-way aspectual classification of English verbs. Dowty (1979) demonstrated that these four classes pattern distinctly with respect to their logical entailments, interaction with temporal adverbials, and tense/aspect morphology. As hypotheses for aspect in learner English center around telicity (for past morphology) and dynamicity (for progressive morphology), this study adopts a tripartite model (cf. Salaberry 1999), grouping achievements and accomplishments under a single class, namely events (telic predicates).¹ Stative and activity predicates are atelic: they denote eventualities that lack an intrinsic temporal endpoint and share the property of homogeneity or internal consistency. In contrast, accomplishment and achievement predicates are telic: they denote eventualities bounded by an intrinsic endpoint and lacking internal homogeneity.

Lexical aspect has been widely adopted as the hypothetical basis for mapping morphology to semantic aspect in learning situations. The LAH (Andersen & Shirai 1996) proposes that in early stages of learning, past and perfective morphology is restricted to telic VPs, present and imperfective morphology to stative VPs, and progressive morphology to activity VPs. The details of the consensus on the nature of this claim are outlined below.

1. As the arguments of a verb may determine its resulting aspectual class, lexical aspect classes are standardly taken to reflect VP-level, not simply V-level, properties (Verkuyl 1972).

Table 8.1 Lexical aspect

	Homogeneity	Durativity	Dynamicity	Telicity	Example
State	+	+	-	-	<i>be, want, know</i>
Activity	+	+	+	-	<i>play, work, walk</i>
Accomplishment	-	+	+	+	<i>explain, write x</i>
Achievement	-	-	+	+	<i>realise, find</i>

Predictions for L1 and L2 learning (Andersen & Shirai 1996: 533):

- Claim 1.* Children first use past (e.g. English) or perfective marking (Chinese, Spanish etc.) on achievement and accomplishment verbs, eventually extending its use to activity and stative verbs.
- Claim 2.* In languages that encode the perfective-imperfective distinction, imperfective past appears later than perfective past, and imperfective past marking begins with stative verbs and activity verbs, then extends to accomplishment and achievement verbs.
- Claim 3.* In languages with progressive aspect, progressive marking begins with activity verbs, then extends to accomplishment or achievement verbs.
- Claim 4.* Progressive markers are not incorrectly overextended to stative verbs.

If, as in English, the target language has no obligatory aspectual (imperfective-perfective) distinction, the LAH predictions for learner use of overt morphology can be simplified further, as in Figure 8.1.

The predicted behavior is illustrated in (1), in which an L2 English speaker uses the progressive with the activity verb *move*, but the past with the accomplishment verb *sit*.

- (1) When *moving* bus (ACT) [when the bus was moving], he *sat* on (ACC) fat woman's knee. (Bardovi-Harlig 2000: 237)

Explanations for the LAH have generally taken two forms: Prototype Theory suggests that learners have a cognitive preference to acquire prototypical members of a particular morphological class first, whereas the Distributional Bias Hypothesis proposes that statistical tendencies in the input are perceived by learners as absolute. (See Andersen & Shirai 1996 for a detailed review.)

OVERT MORPHOLOGY		VERB SEMANTICS
a. Past form	→	Events (vs. states)
b. Progressive form	→	Activities

Figure 8.1 LAH predictions for learner use of overt morphology

The LAH has been supported in studies of L1 (e.g. Bloom et al. 1980) and L2 (e.g. Bardovi-Harlig 2000) acquisition and creoles (e.g. Bickerton 1981). Over two dozen L2 studies claim to corroborate the LAH (cf. Anderson & Shirai 1996; Bardovi-Harlig 2000), with Claim 1 supported most robustly (Bardovi-Harlig 2000: 228) and Claim 4 supported least (Li and Shirai 2000: 50). Partially conflicting findings have been found for Claims 1 and 2 (e.g. Dietrich et al. 1995; Kumpf 1984; Salaberry 1999) and for Claims 3 and 4 (e.g. Housen 2002; Robison 1990; Rocca 2002; Rohde 1996; Sugaya & Shirai 2007; van Rooy 2006). These studies find either absence of the predicted pattern or evidence of discourse or L1 factors not accommodated by the LAH. Recent studies have proposed exploring sensitivity to aspect above the lexical level (Gabriele & Martohardjono 2005; Laleko 2008; Slabakova 2002).

The LAH can be critiqued on three theoretical and methodological points. First, separating lexical and grammatical aspect and focusing exclusively on lexical aspect are not well motivated. In semantics, the compositional view of aspect recognizes that the aspectual properties of simplex eventualities (VP-level aspect) are systematically modified by other operators and may consequently differ at VP and sentential levels.² Lexical aspect is more appropriately seen as the first building block in the final aspectual type of a sentence. Second, there is no typological support for separating VP-level aspect from further aspectual operators: to our knowledge, there is no language that organizes its verbal inflectional system solely on the basis of the situation type expressed by the base predicate. Languages with grammatical aspect morphology are sensitive to clausal, not VP-level, aspectual semantics, so clausal aspect should not be excluded as a potential factor in learning. Finally, the LAH restricts the expressive range assumed for adult L2 speakers. Early LAH findings in L1 acquisition (e.g. Bloom et al. 1980) motivated a search for parallel effects in L2 learners (Bardovi-Harlig 2000: 192; Li & Shirai 2000: 47), but while child learners may acquire aspectual concepts incrementally, initially focusing on verb aspect, adult L2 learners are cognitively mature. Particularly those with complex aspectual morphology in their L1 may not fail to attend to such meanings and markers, as children do.

Despite these issues, many SLA studies have come to be designed around lexical aspect, such that it is often the only aspectual information considered (e.g. Housen 2002: 174; Kihlstedt 2002: 332). Clausal aspect awareness is assumed to be unavailable to adult non-native speakers, even if they have one or more L1s with such morphology. This problem is compounded when elicitation tasks are

2. Such operators may not always be morphologically encoded but they alter the aspect of the resulting predication (e.g. the habitual reading of English past sentences) attributed to a covert operator (Krifka et al. 1995; Rimell 2004).

used, as they permit fine manipulation of lexical aspect but do not always encourage the use of complex past reference, habituais, or other type-shifting operators. While we do not reject the possibility that morphological marking may correlate with the aspectual class of the lexical predicate, we argue that isolating lexical aspect from other aspectual determinants in learner data is not semantically well-motivated and potentially misrepresents the full range of aspectual knowledge for some learners.

8.2.2 The sentential aspect approach

As noted earlier, a characteristic feature of approaches that treat lexical and grammatical aspect as distinct is their view that categories such as *EVENT* and *STATE* belong to a typology of situations, and that grammatical aspect marking does not encode these distinctions (Smith 1991). This view is commonly adopted in most SLA research. A more uniform view of aspectual classification relies on the properties of homogeneity and quantization to describe predicates and how they apply to times or situations.³ Homogeneity refers to the 'subinterval property' of a temporal predicate to apply to subintervals (subsituations) of intervals (situations) that they apply to (Bennett & Partee 1978; Dowty 1979). For example, at the lexical level, the verb *love* is homogeneous (i.e. it has the subinterval property and is atelic) because the semantic properties associated with *love* that hold for a particular interval also hold for each sub-interval of that interval. By contrast, *kill* is quantized (i.e. it lacks the subinterval property and is telic) because it is true over a particular interval, but not true equally for each (or any) proper sub-interval of that larger interval. Crucially, predicates can be described in terms of these properties *regardless* of whether they are lexical (simplex) or affected by further operations (derived). A lexically atelic predicate is, on this view, a lexical item that has the property of homogeneity, while a derived imperfective sentence can equally be characterized by this property. Thus, imperfective and perfective sentences denote homogeneous and quantized predicates respectively, just as lexical verbs do.⁴ This uniform classification is highlighted by type-shifting caused by

3. A predicate *P* is homogeneous, or divisive, if and only if, when it applies to an entity *x*, it also applies to any *y* that is part of *x*; this property is characteristic of atelics. A predicate *P* is quantized, or anti-divisive, if and only if, when it applies to an entity *x*, there is no proper sub-part *y* of *x* such that *P* applies to *y*; this property is typical of telics (Krifka 1989).

4. In this paper, we use the terms 'telic' and 'atelic' to denote classes of VP-level aspect, and the terms 'perfective' and 'imperfective' to denote classes of sentence-level aspect; both pairs of contrasts derive from the same properties of homogeneity and divisivity. See Deo (2006) for a unified account and for extensive typological support for this model.

aspectual operators; for instance, the English progressive and the French *imparfait* can be seen as stativizers, changing a quantized predicate to a homogeneous one (e.g. de Swart 1998; Herweg 1991; Mourelatos 1978). The aspectual class of a sentence is therefore under-determined by the aspectual class of the uninflected verb and its arguments (the VP or uninflected eventuality description). Overt (e.g. adverbial) and covert (e.g. habitual) operators can apply to the description to derive predicates of a different aspectual class.

The importance of this uniform view of aspect for empirical studies of language learning is that, since the verb *as well as* other elements of a sentence figure in the derivation of aspectual predication, the characterization of the cognitive task the learner faces in identifying relationships between morphology and semantics is more comprehensive. Also, unlike the LAH, it accommodates sensitivities to sentential aspect that may be primed by an (im)perfectivity-marking L1.⁵ Our proposal for mapping aspectual distinctions to verb morphology in language learners, particularly those with L1s that encode an (im)perfectivity distinction, is given in (2).

(2) *The Sentential Aspect Hypothesis* (SAH):

Learners hypothesize that morphological marking indexes the aspectual class of the sentential predication (not narrowly lexical aspect alone).

The SAH predicts that temporally bounded sentential predicates (whether boundedness arises from the lexical verb or a perfectivizing operation) are more likely to bear overt past tense than homogeneous, unbounded predicates. The specific predictions in Figure 8.2 contrast with those of the LAH in Figure 8.1.

These predictions are especially pertinent to speakers of L1s with overt markers for perfective and imperfective sentential aspect, as such speakers may consider both categories to be inadequately signalled in English. As a result, past *-ed* and progressive *-ing* are likely to be recruited to these functions.

OVERT MORPHOLOGY		SENTENTIAL ASPECT
a. Past form	→	Perfective
b. Progressive form	→	Imperfective

Figure 8.2 SAH predictions for learner use of overt morphology

5. Note that our use of 'sentential aspect' is not identical to 'grammatical aspect', which generally refers to what we describe as grammaticalized aspectual operators, such as imperfective and perfective morphology. Here, 'sentential aspect' refers to the final aspectual class (imperfective vs. perfective) of the sentence, whether determined by the lexical class of the verb or by higher elements, thus subsuming both lexical and grammatical aspect.

8.3 Hypotheses and data

8.3.1 LAH and SAH predictions

The crucial difference between English and Hindi with respect to the description of past time eventualities is that Indo-Aryan verb systems distinguish between perfective, imperfective, and progressive aspects. In every sentence Hindi speakers must choose between the perfective (*-(y)a*) and the imperfective (*-ta*) (or progressive, *V+rahna*) form of the verb. By contrast, English requires a speaker to choose tense but lacks morphological markers for perfective and imperfective aspect. The primary overt verb morphology in English indicates past tense (*-ed*) and progressive aspect (*-ing*). Indo-Aryan speakers thus present a particularly suitable case for comparison of the LAH and SAH. Their L1 makes them sensitive to perfectivity, a distinction that is absent in English verbal morphology. This permits us to examine whether these speakers retain a sensitivity to clausal (im)perfectivity when acquiring English as an L2, or whether they fall back on purely universal lexical aspect distinctions to determine the use of English morphology.

Both the LAH and the SAH presuppose an aspectual basis for the learner's hypothesis regarding the use of overt morphological forms. The LAH restricts this claim to lexical aspect, leaving unaddressed the possible influence of other aspectual operations and of the L1. The SAH claims that the learner uses morphological marking to index the derived predication (perfective or imperfective) of the clause, taking into consideration both the contribution of the lexical predicate and aspectual operators, and accommodating L1 influence.

The difference between the two approaches is illustrated in examples (3)–(6).

- (3) Mary walked to work on Monday. (event; perfective)
 (4) Mary knew the answer. (state; imperfective)

In both (3) and (4), the aspectual classes of the verb and the sentence are identical. In (3), the lexical aspect of the VP *walk to work on Monday* denotes a telic (quantized) eventuality. Because the only higher operator in the clause is tense and does not affect the aspectual class, the sentential predication remains quantized (perfective). In (4), the lexical aspect of the VP *know the answer* denotes an atelic (homogeneous) eventuality. Once more, the only higher operator is past tense, so the aspectual class of the lexical predicate is again carried over to the sentence-level, i.e. it remains homogeneous (imperfective).

- (5) Mary walked to work on Mondays. (event; imperfective)
 (6) All of a sudden, Mary knew the answer. (state; perfective)

Both examples (5) and (6) involve a mismatch between lexical and sentential aspect because of (overt or covert) type-shifting aspectual operators. The lexical aspect in (5) is telic, but the adverbial *on Mondays* is quantificational and yields a predicate that denotes intervals during which Mondays are characterized by Mary walking to work. This newly derived predicate is homogeneous (imperfective), having the subinterval property, which the original VP-level predicate did not. The sentence-level aspect class derived by the adverbial is therefore different from the aspectual class of the VP. In (6), the reverse is true: the lexical predicate is stative, but the perfectivizing adverbial *all of a sudden* intervenes, rendering the predication perfective.

Under the LAH, the additional aspectual operations in (5)–(6) would not be coded; past tense marking would simply be expected to occur more frequently with the telic VPs in (3) and (5) and less frequently with the atelic VPs in (4) and (6).

By contrast, the SAH predicts that learners are sensitive to aspectual operations above the VP-level and register the final aspectual class of sentences. They are consequently predicted to use more past tense morphology in sentences such as (3) and (6), due to the perfectivity of the final predication, and conversely less past tense morphology with sentences such as (4) and (5) due to the imperfectivity of the final predication.

Derived sentential aspect is usually identical to the initial lexical aspect, due to the absence of intervening operators. Only in a minority of cases do mismatches between the two arise, as in (5) and (6). These mismatches, frequently ignored under LAH methodologies, are in fact key contexts for understanding how learners actually perceive aspectual distinctions. We outline two complete sets of sub-predictions of the LAH and the SAH in (7) and (8), respectively.

(7) **LAH predictions:**

A. Past tense morphology

Overall: Past morphology will co-occur with lexically TELIC VPs.

Misaligned cases: When operators derive a new aspectual class for a sentence, past morphology will still co-occur with lexically TELIC VPs.

B. Progressive morphology

Activities: Progressive morphology will be restricted to ACTIVITY VPs.

Imperfectivity: Progressive morphology will not be extended to STATE VPs or other categories of IMPERFECTIVE sentences (habituals).

(8) **SAH predictions:**

A. Past tense morphology

Overall: Past morphology will co-occur with PERFECTIVE sentence.

Misaligned cases: When operators derive a new aspectual class for a sentence, past morphology will co-occur with derived PERFECTIVE sentences.

B. Progressive morphology

Activities: Progressive morphology will not be restricted to ACTIVITY VPs.

Imperfectivity: Progressive morphology use will be extended to all categories of IMPERFECTIVE sentences (habituals, statives). It will not be extended to PERFECTIVE sentences.

In the analysis that follows, we examine the data according to these two hypotheses. The detailed examination of past tense morphology and of progressive morphology will sequentially evaluate each of the four sub-claims in (7) and (8).

8.3.2 Data and coding

Since Indian English is an indigenously transmitted, stable non-native variety of English, we are interested in its natural system of tense-aspect morphology. Our data consist of naturalistic sociolinguistic interviews, lasting between one half and two hours. The twelve individuals in this study are part of a larger bilingual dataset of individuals who acquired English through formal and informal modes in India. All twelve are dominant in their first language but have regular, daily use of L2 English, often with other non-native speakers.⁶ All are speakers of Hindi, two are additionally native speakers of Gujarati and three are native speakers of Punjabi. These three languages are almost identical in terms of the tense-aspect parameters relevant to this discussion: they inflect for imperfective and perfective with reflexes of the same Sanskrit participles and mark progressive with a periphrastic construction involving the same auxiliary verb (Masica 1991: 292–302).

The informal empirical observation for Indian English is that speakers *undershoot* Standard English usage in their use of English past tense morphology and *overshoot* Standard English usage in their use of progressive morphology. It is thus logical to examine which *meanings* constrain the use of the standard form in the former case, and to examine the extension of the *form* to new meanings in the

6. All participants use English mainly for daily work-related interactions. None had English medium school education, but five had limited English medium tertiary education.

Table 8.2 Factor groups coded for past tense tokens (N = 702)

Factor group	Factors
LEXICAL ASPECT	state, activity, event
SENTENTIAL ASPECT	perfective, 4 categories of imperfective
PAST TENSE FORM	null, overt, past/present/null-copula+progressive
VERB TYPE	simple past, progressive
STEM TYPE	3 regular suffix types, irregular
PHONOLOGICAL SEGMENT	preceding and following for regular verbs
VERB	<i>do, have, come, go, say, start, be-COP, be-AUX, other</i>

Table 8.3 Factor groups coded for progressive tokens (N = 339)

Factor group	Factors
LEXICAL ASPECT	state, activity, event
SENTENTIAL ASPECT	perfective, 4 categories of imperfective
AUXILIARY TYPE	overt, null
TENSE	past, present, future

latter case. We therefore extracted all sentences that had semantic past *reference* and examined the degree of overt use of past tense *forms* in these contexts, coding each token for the factors listed in Table 8.2.

In the case of progressive morphology, we took the reverse approach. We identified all instances of overt progressive *forms* in the data and examined the type of aspectual *meaning* ascribed to each token, coding for the factors listed in Table 8.3.⁷

We used standard tests of entailment and acceptance with different time adverbials to determine lexical aspect (Dowty 1979; Robison 1990; Shirai & Kurono 1998) and followed Salaberry (1999) and other aspect literature (Kenny 1963; Mourelatos 1978; Bach 1986; de Swart 1998) in adopting a tripartite classification for lexical predicates into states, activities, and events.

Sentential aspect was determined through a combination of adverbial information, narrative sequencing, and interviewer notes on intended meanings.⁸ Each token was coded for one of five possible sentential aspect categories, perfective

7. There are two reasons for this approach. First, since Indian English speakers over-extend the progressive, identifying only standard contexts of use of progressive would fail to capture all cases of over-extension. Second, some contexts in Standard English exhibit variation with the progressive, making it impossible to predict all contexts in which progressives can occur.

8. To check reliability, 10% of both data sets were independently re-coded by the second researcher. The inter-rater reliability was 85.2% (post-discussion: 96.3%).

(quantized) or one of four types of imperfective (homogeneous): statives, progressives, delimited habituals, and non-delimited habituals. Perfective predicates lack the subinterval property and instead describe temporally bounded events (9a). Stative verbal and non-verbal predicates have the subinterval property, e.g. (9b). Progressive predicates refer to a subinterval of a single ongoing episode (9c).⁹ Habitual predicates describe a generalization over episodes rather than reporting a particular episode; the habitual operator is understood to derive stative predicates from non-stative predicates. The subclass of delimited habituals covers sentences in which it is implied that the habit is temporary, or temporally bound (9d). The sub-class of non-delimited habituals covers sentences in which there is no explicit or understood temporal bound on the habit described (9e).

- (9) a. After he *finished* BCom degree, then he said I want to do the ministry. [RS: c324]
 b. And father *was* the provider. [KP: c022]
 c. We have to give them medicines, blankets because winter *is coming*. [RT: d107]
 d. *Those days* only social worker *worked* in the Red Cross. [RT: d076]
 e. I *studied* with my aunt. [KP: c287]

Additional factors in Tables 8.2 and 8.3 are not discussed in detail in this article. The past tense data were subjected to a multivariate analysis using Goldvarb X (Sankoff, Tagliamonte & Smith 2005). Any form of past marking counted as overt use and rare instances of highly nonstandard constructions (e.g. *I no want*) were excluded. Past progressives were included, as the auxiliary standardly requires past tense, and perfect contexts were excluded. The progressive morphology dataset contains fewer tokens and is thus less amenable to regression analysis, so only chi-square measures and descriptive statistics are used.

9. This category was difficult to examine as there are few past tense progressives in the data. Our coding errs on the side of conservatism, omitting unmarked past tokens that could be interpreted as narrative present. Other studies have not been so conservative (e.g. Bardovi-Harlig 2000: 219), and run the risk of coding narrative present (often used with atelics) as evidence of unmarked past atelics, in agreement with the LAH.

8.4 Results

8.4.1 Past tense marking

Table 8.4 presents a multivariate analysis of the use of overt past marking.¹⁰ We do not discuss the effect of verb choice, save to note that it is the strongest factor and points to the methodological importance of considering factors other than lexical aspect (cf. Bayley 1994). Of greatest interest to the present discussion is that sentential aspect exhibits a strong and ordered effect on past tense omission. Lexical aspect shows a dramatically weaker effect. The range of weights for sentential and lexical aspect (679 and 226, respectively) shows an enormous difference in the relative strength of the two factors. The overall effect of sentence perfectivity is greater than that of lexical telicity.

Furthermore, although the percentages for lexical aspect in Table 8.4 suggest that events are more strongly associated with overt use of past tense than states and activities, as the LAH predicts, the factor weights for lexical aspect do not reflect this order. This very surprising pattern is likely to be caused by differential rates of embedding of these lexical aspect types within perfective and imperfective sentences.

In contrast to the inconsistent lexical aspect distribution, we see a very systematic and fine-grained gradient of sentential aspect types in Table 8.4. Perfectives show by far the highest weight favoring overt past. Perfectives are predicted in the SAH to correspond with higher rates of past marking due to their temporal boundedness. All imperfectives show low weights, favoring omission of past marking, as predicted. Within these low rates, we find finer distinctions that are explicable by the SAH. Temporally delimited habituais show a significantly higher rate of overt past than non-delimited habituais.¹¹ The SAH anticipates more overt past with temporally delimited habituais, as temporally bound habits are construed as episodic and temporary, resulting in overt marking to indicate temporal location.¹² Correspondingly, the two categories of imperfective that bear no temporal coordinates semantically (stative and non-delimited habituais) show the least overt past.

10. Factor weights above .5 favor overt past marking and weights below .5 disfavor it.

11. $\chi^2(4) = 119.2$; $p \leq 0.001$.

12. We might expect to find a similar divergence within types of stative predicates, with individual-level (permanent property, e.g. *to be tall*) predicates patterning like non-delimited habituais, and stage-level (temporary property, e.g. *to be amused*) predicates patterning like delimited habituais, due to the presence of temporal coordinates. We only found a slight trend in this direction.

Table 8.4 Factors affecting overt past tense marking

Factor	Total N	Percentage	Weight
VERB			
'say/tell'	41	95.1%	.835
'be'-copula	135	63.0%	.765
'go'	44	77.3%	.657
'do'	39	66.7%	.653
'be'-auxiliary	52	46.2%	.517
other lexical V	282	52.1%	.355
'come'	47	66.0%	.337
'have'	32	15.6%	.283
'start'	30	40.0 %	.148
			Range = 687
SENTENTIAL ASPECT			
Perfective	346	76.6%	.820
Delimited habitual	53	45.3%	.325
Progressive	3	33.3%	.234
Stative	224	44.2%	.176
Non-delimited habitual	76	18.4%	.141
			Range = 679
LEXICAL ASPECT			
Activity	105	42.9%	.630
State	232	47.0%	.591
Event	365	68.2%	.404
			Range = 226

Input: .426, Log likelihood: -374.135, $\chi^2(32) = 54.491$, $p = 0.032$.

Not selected as significant: stem type, phonetic factors (for regular forms).

The second pair of predictions in (7A) and (8A) relates to the minority of tokens in which lexical and sentential aspect are 'misaligned': that is, the sentence contains a telic predicate but is imperfective, or vice versa (cf. (5)–(6)). Although infrequent, such tokens represent key data that can truly establish the nature of a learner's aspectual sensitivity, yet they have been largely overlooked in the SLA literature.¹³

Tables 8.5 and 8.6 compare overt past marking for telic predicates in perfective and imperfective sentences (Table 8.5) and for atelic predicates in perfective and imperfective sentences (Table 8.6). Although misalignments are rare, morphological marking is clearly resolved in favor of sentential, rather than lexical,

13. Important exceptions include Bardovi-Harlig & Reynolds (1995), Huang (1999), and Shirai (2002), all of whom found that clausal habituality corresponded to lower use of past marking.

Table 8.5 Rate of past tense with perfective and imperfective sentences containing telic predicates

	% Overt past tense	Total N
Telic: Perfective (common)	75.9%	320
Telic: Imperfective (rare)	13.3%	45

$\chi^2(1) = 71.3; p \leq 0.001$ (significant).

Table 8.6 Rate of past tense with perfective and imperfective sentences containing atelic predicates

	% Overt past tense	Total N
Atelic: Imperfective (common)	42.4%	311
Atelic: Perfective (rare)	84.6%	26

$\chi^2(1) = 17.2; p \leq 0.001$ (significant).

aspect. In Table 8.5 (lexically telic predicates), we first see that the default configuration where telic verbs are embedded in perfective sentences correlates with very high rates of past tense marking. The LAH predicts that even if a telic verb is embedded in an imperfective sentence, its lexical aspect should continue to correspond to identically high rates of past tense marking. However, we see a dramatic drop in past tense marking in such cases, as a result of the derived imperfective status of the sentences the predicates occur in. The precise reverse pattern occurs in Table 8.6.

It is clearly the final aspect class that drives the use of overt past morphology in the few peripheral, yet crucial, instances where higher aspectual operators change the aspectual classification of the sentence. The examples in (10) illustrate this pattern in the data.

- (10) a. Lexical aspect = ATELIC; Sentential aspect = PERFECTIVE (overt timespan adverbial operator)
Morphological marking = *Overt past due to perfectivity*
For first 12 year I was there because my father was posted there. [RT: d033]
- b. Lexical aspect = TELIC; Sentential aspect = IMPERFECTIVE (covert habitual operator)
Morphological marking = *Null past due to imperfectivity*
Before some time I sell the watches, but right now no. [RG: d034]

In sum, for the use of past tense morphology among these speakers, both pairs of predictions in (7A) and (8A) are resolved in favor of the SAH.

Table 8.7 Distribution of progressive *-ing* across sentential aspect categories

	% Of all progressives	Total N
Delimited habitual	33.0%	112
Non-delimited habitual	30.7%	104
Progressive	18.3%	63
Stative	14.7%	50
Perfective	2.9%	10

8.4.2 Progressive marking

We now turn to the two predictions in (7B) and (8B), which concern the use of progressive *-ing*. The LAH prediction (7B) initially appears to be confirmed, as Indian English speakers use the progressive more with activity VPs (47.5%) and least with states (20.1%). However, a comparison to Housen's (2002: 17) native speaker rates show that these rates do not diverge much from native speaker distributions (53% and 9%, respectively); indeed, the Indian English speakers show marginally *lower* use of *-ing* with activity verbs than native speakers. There is thus no over-use of *-ing* with activity verbs in the data.

Table 8.7 examines the data from the point of view of sentential aspect classes. Of the imperfective categories in Table 8.7, progressive and delimited habitual contexts are the only standard environments for use of the progressive form in English, while its use with non-delimited habituals and statives is non-standard. The table and the examples in (11) show that the progressive form in Indian English is systematically over-extended to stative and habitual (derived stative) predicates, i.e. to all imperfective categories.¹⁴

- (11) a. *Non-delimited habitual*: Generally only dry-cleaning clothes are coming. [PB: d035]
b. *Stative*: We are knowing each other. [RS: c383]

The LAH claim in (7B) that the progressive will be restricted to activities not be over-extended to states is robustly refuted by our data. The corresponding SAH prediction in (8B) that *-ing* will be over-extended to all imperfective categories is strongly supported.

14. We do not discuss the few aberrant instances of use of progressive marking with perfectives. Interestingly, the few perfective verbs that do occur with the progressive are inceptives and ingressives, the same verbs associated with null past-marking in the data: *come, start, begin*. The category 'stative' in Table 8.7 excludes standard use of *-ing* with lexically stative verbs (e.g. *I'm thinking that ...*). These are traditionally analyzed as non-stative in meaning due to their in-progress or change-of-state interpretation (Comrie 1976: 36; cf. Walker, this volume).

8.4.3 Explanations

The analysis has shown that the imperfective-perfective sentential aspect contrast, which is obligatorily marked in the Indo-Aryan L1s involved, is replicated in Indian English in the use of *-ed* and *-ing*. The universalist lexical aspect approach has led to a backgrounding of L1 and target L2 explanations in aspectual restructuring, influences for which the fields of creole studies and SLA have shown extensive evidence (Siegel 2003). L1 effects, target L2 effects, and universal biases are all possible explanations accommodated by the SAH. The emergent system of Indian English invites a return to such influences as explanations. In general, substrate (L1) and superstrate (target L2) sources must be assessed before appeals can be made to universal explanations (Sharma 2009), and we find that these provide a sufficient explanation for innovations in Indian English.¹⁵

In order to verify whether the perfective-imperfective uses of *-ed* and *-ing* involve direct transfer of L1 functions, we compare the Indian English usage to the primary Indo-Aryan substrate for the variety, Hindi, as well as to the superstrate English. It is clear in Table 8.7 that at least within past reference, the transfer of perfective meaning to the English form *-ed* arises directly from the past perfective Hindi inflection *-(y)a*. The imperfective is less clear: Both the L1 and the L2 systems draw a comparable distinction between progressive contexts and other imperfective contexts. In spite of this, the contact system bears no resemblance to either system and instead generalizes one form (*-ing*) across all imperfective contexts, exactly like the French *imparfait*.

The broad categories of imperfective in Table 8.8 (based on Comrie 1976) in fact inaccurately suggest that the boundary between progressive and other imperfectives is parallel in Hindi and English. A more detailed comparison of imperfective clause types (see Sharma 2009) revealed significant mismatches. The English progressive *-ing* occurs in an unusually wide range of constructions (Comrie 1976: 25), while the Hindi progressive is a more strict progressive form. As a result, the English progressive encroaches extensively on the non-progressive territory associated with *-ta* in Hindi, e.g. in delimited habitual and adverbial uses. In searching for overt forms equivalent to *rahna* and *-ta*, the Hindi speaker encounters *-ing* in both domains and thus over-generalizes *-ing*

15. The pattern found for Indian English does not seem to arise across all contact situations, further vitiating a universal explanation. In fact, Bickerton (1984) notes that Indian English progressive statives contradict universalist predictions and suggests an L1 influence. L1 transfer (vs. universal markedness) as an explanation is also supported in an initial comparison to a different L1 system (Chinese, for Singaporean English) in which differences in type and degree of restructuring in the contact variety emerged (Sharma 2009).

Table 8.8 Aspectual uses of morphological devices in Hindi, Indian English, and Standard English

		Hindi	Indian English	Standard English
PAST	Perfective	dho-ya	wash-ed	
	Neutral			wash-ed
IMPERF	Progressive	dho raha	wash-ing	wash-ing
	Habitual	dho-ta	wash-ing	wash-s
	Stative	jan-ta	wash-ing	know-s

as a general marker of imperfectivity. The innovative imperfective use of *-ing* in Indian English thus arises out of both L1 and target L2 properties.

8.5 Conclusion: Implications for the study of aspect

This paper explored two views of how aspectual semantics influence L2 English tense-aspect morphology. The new methodology codes not only lexical aspect but also (derived) sentential aspect. Sensitivity to sentential aspect is confirmed in several ways: Indian English speakers align overt past morphology with perfective predications and overt progressive morphology with imperfective predications, creating a perfective/imperfective distinction absent in English morphology.

This systematic sensitivity to sentential aspect would not be registered under LAH methodology, and the apparent lexical aspect patterns would simply be interpreted as a lexical effect. However, the new methodology, based on a more comprehensive, compositional framework of aspectual predication, accounts for these patterns through the frequent ‘visibility’ of lexical aspect at the level of sentential aspect in the absence of intervening operators. The crucial ‘misaligned’ cases, along with other sentential aspect patterns inexplicable under the LAH, support this view.

Unlike the lexical approach, the sentential aspect approach allows for universal, L1 or L2 sources. The reanalysis of *-ed* as a perfective marker appears to derive directly from the L1 system, while the reanalysis of *-ing* as an imperfective marker appears to result from a more complex L1-L2 interaction. This greater complexity may account for the fact that past tense omission is not as widespread a feature of Indian English as nonstandard progressive use. Furthermore, perfectivity-driven past tense use generates a *subset* of Standard English uses, whereas imperfectivity-driven progressive use generates a *superset* of Standard English uses. The former can expand straightforwardly towards the target based on positive evidence in the input, whereas the latter cannot (cf. Subset Hypothesis; White 1989). These

factors may additionally account for the greater variation in progressive morphology use found more widely across L2 English speakers.

Further applications of the proposed model to different learning situations may confirm situations of genuine sensitivity to lexical aspect alone, for instance in child learning or when the L1 is insensitive to sentential (im)perfectivity. Our claims regarding the SAH are for now restricted to learners with perfectivity-marking L1 systems. Earlier studies of this group which seemed to confirm the LAH may have merely picked up an epiphenomenon of sentential aspect marking (e.g. Bayley 1994; Dietrich et al. 1995; Giacalone Ramat & Banfi 1990; Robison 1995; Shirai 1995). Certainly the present study finds apparent lexical effects that could similarly have been interpreted as the principal basis for morphology use; only additional coding of the complete aspectual derivation led to the discovery that lexical effects constitute part of a broader sentential aspect effect. Thus, lexical aspect studies that do not consider aspectual operations above the VP may fail to identify underlying sensitivity to the final aspectual predication.

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CHAPTER 9

Expressing tense and aspect

The case of adult Chinese-Spanish speakers in Ecuador

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9.1 Introduction

Every language has its own ways of expressing tense and aspect grammatically, which complicates the acquisition of such features by adult learners. The acquisition of Spanish tense and aspect by first-language speakers of Chinese can be especially difficult. No variety of Chinese marks tense through morphological inflections, as Spanish does; rather, they refer to time lexically, through adverbs and adverbial phrases (Norman 1988). Additionally, the perception of aspect in Chinese is the reverse of that in Spanish, in which greater importance is placed on the temporality of a situation than on its shape.

Such cross-linguistic distinctions in the realization and perception of aspect have been argued to have consequences for second language acquisition. Some believe that learners acquire the aspectual meanings before they acquire the linguistic forms, while others hold that forms are acquired before the semantic aspectual distinctions (see Hinkel 1992 for an overview). To date, it has not been determined whether speakers of morphologically tenseless languages, such as Chinese, can fully master the verbal system of tenses in languages such as Spanish (Chappell & Rodby 1983; Hinkel 1992: 559). In this chapter, by comparing the Spanish of older adult Chinese speakers with that of younger adults who acquired and learned Spanish formally, I provide evidence that the choice of verbs and use of past tense forms in the older speakers is influenced by the aspectual system of their first language.