

Aktionsart, progressive aspect and underspecification*

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Lee, Seung-Ah. 2015. Aktionsart, progressive aspect and underspecification. *Linguistic Research* 32(1), 151-193. This paper focuses on aspectual progressives in English and accounts for the interaction of the progressive aspect and Aktionsart by treating verbs as lexically underspecified for stativity and punctuality. Since Vendler (1957), it has largely been assumed that state and achievement verbs are incompatible with progressives (e.g. **I am knowing the answer* and **I am recognising a mistake*). Yet, according to Dowty (1972, 1979), Mourelatos (1978), Bach (1981) and Biber *et al.* (1999), among others, there are progressives that are resistant to this line of analysis (e.g. *We are living in London* and *John is dying*). The present account reconciles these positions by proposing that verbs are partially underspecified for aspectual type in the lexicon. More specifically, the proposed account follows Van Valin & LaPolla (1997) in treating Vendler's (1957) verb classes in terms of bundles of binary-valued features, namely [\pm static], [\pm telic] and [\pm punctual]. However, unlike in Van Valin & LaPolla (1997), these features are not fully specified in lexical entries. States are lexically unspecified for the distinctive feature [static]. The feature [punctual], which characterises achievements, likewise remains unspecified in the lexicon. The key idea of the present account is that the value of any unspecified feature F is resolved once in a given context by the use of certain adverbials and so on. By invoking the notion of 'underspecification', it is possible to accommodate counterexamples to Vendler's (1957) claims. (Ewha Womans University)

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1. Introduction

The English progressive has a wide variety of uses, ranging from aspectual (i.e. canonical) to non-aspectual (i.e. non-canonical). The main function of the progressive is to present a situation as ongoing, and the progressive that serves this primarily aspectual function is referred to as an ‘aspectual progressive’. On the other hand, the uses of the English progressive that are not in the strictest sense aspectual are called ‘non-aspectual progressive’.¹ In this paper, the term ‘progressive aspect’ is reserved for aspectual progressives only, while the term ‘progressive construction’ (*be* + *V-ing*) is applied to both aspectual and non-aspectual progressives. The focus of this study is aspectual progressives in English.

Specifically, this paper considers the distributional constraints on aspectual progressives in English and accounts for the interaction of the progressive aspect and Aktionsart (‘kind of action’) by appealing to the notion of ‘underspecification’. Since Vendler (1957), it has largely been assumed that state and achievement verbs are incompatible with progressives. Yet, according to Dowty (1972, 1979), Mourelatos (1978), Bach (1981) and Biber *et al.* (1999), among others, there are progressives that are resistant to this line of analysis. To synthesise insights from both sides, the present study proposes that verbs are partially underspecified for aspectual type in the lexicon. That is, the principal innovation in the present account lies in the way that aspectual properties of verbs are encoded in the lexicon. By invoking the notion of underspecification, it is possible to accommodate counterexamples to Vendler’s (1957) claims.

The body of this paper is divided into five sections. Section 2 reviews Vendler’s

¹ Non-aspectual progressives include the progressive futurate (e.g. *I’m leaving tomorrow*), the habitual progressive (e.g. *He’s smoking a lot these days*) and the experiential or interpretative progressive (e.g. *You’re imagining things*). There are also non-canonical uses of the progressive that are motivated by pragmatic factors, such as politeness (e.g. *I hope ...* vs. *I’m hoping ...*; *I wonder ...* vs. *I was wondering ...*; *do you want ...* vs. *were you wanting ...*), as noted by Quirk *et al.* (1985: 210), Leech (1987: 28 – 9) and Mair (2012: 813 – 14), among others. The meaning of ongoingness is not salient in non-aspectual progressives, and therefore they will not be of further concern in this study, which addresses the interaction of the progressive aspect (i.e. grammatical aspect) and Aktionsart (i.e. lexical aspect). Non-aspectual uses of the English progressive are dealt with separately by the author in two previous published works (Lee 2006, Lee 2011). Lee (2006) also discusses the changes in the use of the English progressive. It must be noted that not all may agree with the distinction between aspectual and non-aspectual progressives. Hong (2013), for example, provides a unified account of the progressive without distinguishing the two.

(1957) and Biber *et al.*'s (1999) approaches to co-occurrence restrictions on aspectual progressives, and it presents the results of a small-scale corpus investigation. Section 3 outlines the underspecification approach proposed in this paper. Section 4 provides illustrative examples of aspectual type-shift and provides an underspecification account of these phenomena. Section 5 considers several previous approaches and discusses the advantages of the present analysis. The final section summarises the main points of the proposed analysis.

2. Co-occurrence restrictions on aspectual progressives

2.1 Vendler's (1957) Aktionsart-based account

Vendler (1957) categorises verbs into four aspectual types on the basis of the restrictions on their co-occurrence with adverbials and the progressive aspect, and some of their entailments: states, activities, accomplishments and achievements. Vendler (1957: 146) further argues that states and achievements together form a 'genus', because in his view, a striking property of these two types of verbs is their resistance to progressivisation. Now the question arises as to why states and achievements disallow the progressive. In what follows, I will provide a concise general account of this question. The feature analysis of Vendler's (1957) four classes proposed by Van Valin & LaPolla (1997: 93) provides a helpful hint on this question (see table 1).²

² The present study is agnostic about the precise technical elaboration of Role and Reference Grammar (RRG). This study just exploits the feature analysis of Vendler's (1957) four verb classes proposed by Van Valin & LaPolla (1997: 93) as a good starting point for the underspecification approach. A number of researchers, including Van Valin himself, have made some changes to Vendler's (1957) original taxonomy and nomenclature for their own purposes. Probably the most notable change is the recognition of a fifth class called 'semelfactive' (Smith 1997). In this paper, I will maintain the original four-way classification.

Table 1. Vendler's (1957) verb classes (Van Valin & LaPolla 1997: 93)³

Aktionsart Features	State	Activity	Accomplishment	Achievement
[static]	+	-	-	-
[telic]	-	-	+	+
[punctual]	-	-	-	+

Let us first consider what exactly makes progressives with state verbs unacceptable. State verbs do not normally take the progressive because there is a clash between the [+static] feature of states and the ongoingness property of the progressive aspect. As discussed by Quirk *et al.* (1985: 197), Brinton (1988: 39–40), Biber *et al.* (1999: 460) and Huddleston (2002: 124), *inter alia*, the primary function of the progressive is to indicate ongoingness. Yet something that is static does not move or change and therefore cannot be regarded as ongoing. As Brinton (1988: 40) puts it, ‘though [states] are continuous, they involve no change and hence cannot be seen as developing or ongoing’. Most descriptive or pedagogical grammars of present-day Standard English refer to the distributional restrictions on the use of the progressive aspect as prohibited with state verbs used in a stative manner, as illustrated in the examples in (1)–(3).

- (1) a. We own a house in the country.
 b. *We are owning a house in the country.

(Quirk *et al.* 1985: 198)

³ A commentator raises the following question: in what sense can an achievement be seen as telic since the moment of inception and of termination coincide in a punctual event? To answer this question, let us consider the following passage:

Achievements also have terminal points; if a bomb explodes or a window shatters, the terminal point is the moment of the explosion or the shattering. An achievement is a transition between one state of affairs (the bomb is unexploded, the window is whole) and a new state of affairs (the bomb is exploded, the window is shattered). Hence these verbs are [+telic] as well. (Van Valin 2005: 34)

Semelfactives are considered to be [-telic] (Smith 1997, Van Valin 2005: 34). The concept of telicity has been questioned by several authors, such as Declerck (1979), Dahl (1981) and Depraetere (1995). However, this paper follows Van Valin & LaPolla (1997: 93) and Shirai (2002: 456), among others, in using the feature [telic] for distinguishing Vendler's (1957) four verb classes.

(2) *I am knowing the answer. (Celce-Murcia & Larsen-Freeman 1999: 121)

(3) a. The flag is red.
b. *The flag is being red.

(Huddleston 2002: 119)

Let us now turn to the question of what specifically is wrong with progressive constructions with achievement verbs. Progressives with achievement verbs are normally not allowed because of a fundamental semantic conflict between the [+punctual] feature of achievements (see table 1) and the ongoingness property of the progressive aspect. Compared to states, achievements have received relatively little attention in connection with the progressive aspect in the field of pedagogical grammar. Comparatively recent theoretical studies on this issue include Rothstein (2004) and Taniwaki (2005).

2.2 Biber *et al.*'s (1999) frequency-based account

Dowty (1972, 1979) was the first to point out that Vendler's (1957) major division between states and achievements, on the one hand, and accomplishments and activities, on the other hand, is unmotivated. Since at least Dowty (1972, 1979), Mourelatos (1978) and Bach (1981), it has been widely known and discussed that virtually all state and achievement verbs can occur in the progressive, under appropriate conditions. This section considers the view that there are no verbs that never occur in the progressive aspect. Specifically, this section discusses Biber *et al.*'s (1999) approach to the English progressive, which takes a frequency-based perspective.

In Biber *et al.* (1999: 470), the term 'progressive aspect' is used in a broader sense encompassing both the 'aspectual progressive' and the 'progressive futurate' (non-aspectual progressive) in my terms (see footnote 1). On the basis of corpus findings including frequency data, Biber *et al.* (1999: 472) remark that 'both dynamic and stative verbs are included among the most common verbs in the progressive' and that 'both dynamic and stative verbs are included among the verbs that very rarely take the progressive'.⁴ These observations are made in response to a number of accounts that describe the progressive aspect as not occurring with state

verbs. Thus, the basic premise that is implicit in Biber *et al.*'s (1999) account is that there are no verbs that never occur in progressive constructions. According to Biber *et al.* (1999: 473–5), verbs commonly or rarely occurring with the progressive aspect (à la Biber *et al.* 1999) correlate with (i) agentivity and (ii) the 'process' element of meaning. Of these two, the first deserves attention.

Biber *et al.* (1999: 473) clarify the meaning of 'agentivity', also known variously as 'agency', 'volitivity', 'intentionality' and 'controllability', in the following terms: 'the common progressive aspect verbs typically take a human subject as agent [. . .], actively controlling the action (or state) expressed by the verb'.⁵ In this account, verbs like *appreciate*, *desire*, *know*, *like* and *want* take a human subject as experiencer rather than agent, and thus they rarely occur with the progressive (Biber *et al.* 1999: 473).

Now let us consider some progressive constructions that are of particular relevance to the correlation described above. As has been noted by several previous investigators (e.g. Dowty 1975: 580, Scheffer 1975: 100, Comrie 1976: 36, Ljung 1980: 29), whenever the progressive is used with the '*be* plus predicative adjective or noun' combination, the goings-on indicated by such expressions are always interpreted agentively. For concreteness, consider the following contrast:

- (4) a. She is kind.
- b. She is being kind.

In the non-progressive (4a), we interpret *kind* as denoting a personal quality. By contrast, we interpret the progressive construction (4b) as involving agentivity, as describing her present behaviour. Thus, whereas (4a) is interpreted as 'She is

⁴ A commentator suggested that the latter claim might have to do with the high frequency of epistemic parenthetical forms that almost always occur in the simple present (e.g. *I think/guess/suppose/mean*), some of which could be seen as dynamic. According to Biber *et al.* (1999: 459), verbs such as *mean* and *suppose* are 'verbs occurring over 80% of the time in the present tense'.

⁵ The claim that agentivity interacts with the progressive aspect (à la Biber *et al.* 1999) is certainly not unique to Biber *et al.*'s (1999) study. For example, looking at the English progressive from the 17th to the 20th centuries, Kranich (2010: 193) notes that '[t]here is a certain association of the progressive with agentivity, but [that] it is not absolute'. According to Hundt (2004), the use of the progressive with nonagentive subjects and inanimate subjects increased in the 19th century compared to the 18th century.

constitutionally good-natured', (4b) may be interpreted as 'She is acting kindly towards someone' (Leech 1987: 29). Similarly, (5) may be paraphrased as 'He's acting foolishly' (Leech 1987: 29).

(5) He's being a fool.

Given that agentivity entails dynamicity (Filip 1999: 19), the verb *be* used in the progressive constructions such as (4b) and (5) is a dynamic verb, not a stative verb.⁶ I return to this point in section 4.1.1.

2.3 An investigation of the ICE-GB, ICE-India and ICE-Ireland corpora

In this section, I present a corpus-based study carried out by the author in order to evaluate the two alternative approaches mentioned in the preceding subsections. The three corpora used in the study were the British, Indian and Irish components of the *International Corpus of English* (ICE): ICE-GB, ICE-India (IND) and ICE-Ireland (IRL). Each ICE corpus contains one million words of text (approximately 600,000 words of speech and 400,000 words of writing), dating from the early 1990s, and adheres to a common corpus design, which allows a comparative study of the varieties of English. It has been reported in the literature that Indian, Irish and Scottish English show greater flexibility in the use of the progressive with a state verb than British and American English (e.g. Harris 1993: 164, Kabakčiev 2000: 168, Sharma 2009: 181–82, Mair 2012: 814). However, in the absence of the full versions of ICE-USA and ICE-Scotland, only the three above-mentioned ICE corpora were chosen.

Instead of conducting a full-scale investigation, seven state verbs (*believe, know, like, love, remember, understand* and *want*) and seven achievement verbs (*detect, discover, notice, perceive, recognise, spot* and *witness*) were searched for in each corpus due to time constraints.⁷ All 14 are verbs of cognition. The verbs were

⁶ Although Biber *et al.* (1999: 473–74) argue for the link between progressive constructions and agentivity, it is not entirely clear from their discussion whether they treat the verb *be* as dynamic or stative.

⁷ Both the internationally current spelling *recognize* and the additional British variant *recognise* were

classified according to the type of construction in which they appeared: progressive and non-progressive (abbreviated as ‘Non-prog’ in tables 2 and 3 below). Non-progressive constructions refer to verb phrase constructions that contain the base form, *-s* form, past-tense form or past-participle form of the verb. In the case of ICE-GB (release 2), the dedicated retrieval software ICECUP (ICE Corpus Utility Program) version 3.1 was used, while WordSmith Tools version 5 (Scott 2008) was used to extract data from ICE-IND and ICE-IRL. Unlike the two other ICE corpora, ICE-IRL is provided only in raw-text format, so it was tagged for part of speech (POS-tagged) using the CLAWS4 tagger with the standard C7 tagset.⁸ All tokens retrieved from the three corpora were checked by the author, and irrelevant examples (e.g. constructions with gerunds, the expression *you know* used as a discourse marker, etc.) were manually removed.⁹

Tables 2 and 3 present the frequencies of the selected state and achievement verbs in the three corpora. For example, in ICE-GB, 361 tokens of the verb *remember* were found in non-progressive constructions, while only one token (0.28%) of this verb occurred in the progressive construction.

Table 2. Frequencies of selected state verbs in ICE-GB, ICE-IND and ICE-IRL

Verb	ICE-GB		ICE-IND		ICE-IRL	
	Non-prog	Progressive	Non-prog	Progressive	Non-prog	Progressive
believe	387	0 (0.00%)	183	0 (0.00%)	381	0 (0.00%)
know	2,052	0 (0.00%)	1,813	24 (1.31%)	2,564	1 (0.04%)
like	600	0 (0.00%)	779	2 (0.26%)	992	1 (0.10%)
love	109	0 (0.00%)	124	0 (0.00%)	187	3 (1.58%)
remember	361	1 (0.28%)	209	1 (0.48%)	463	2 (0.43%)
understand	229	2 (0.87%)	298	2 (0.67%)	206	0 (0.00%)
want	1,218	10 (0.81%)	1,135	4 (0.35%)	1,234	6 (0.48%)
Total	4,956	13 (0.26%)	4,541	33 (0.72%)	6,027	13 (0.22%)

searched for in all three corpora.

⁸ CLAWS (the Constituent Likelihood Automatic Word-tagging System) has been in continuous development by the University Centre for Computer Corpus Research on Language (UCREL) at Lancaster University. UCREL offers a free CLAWS WWW tagger. URL: <http://ucrel.lancs.ac.uk/claws/trial.html>.

⁹ In the case of ICE-GB, the verb *know* used in the discourse marker *you know* is tagged ‘FRM’ (formulaic expression; Nelson *et al.* 2002: 30). However, in the case of ICE-IND and ICE-IRL, the same verb is tagged ‘VV0’ (base form of lexical verb). In the latter case, therefore, the manual removal of such instances was required.

Table 3. Frequencies of selected achievement verbs in ICE-GB, ICE-IND and ICE-IRL

Verb	ICE-GB		ICE-IND		ICE-IRL	
	Non-prog	Progressive	Non-prog	Progressive	Non-prog	Progressive
detect	34	2 (5.56%)	36	1 (2.70%)	27	0 (0.00%)
discover	76	2 (2.56%)	75	0 (0.00%)	78	1 (1.27%)
notice	99	1 (1.00%)	113	0 (0.00%)	71	2 (2.74%)
perceive	23	0 (0.00%)	24	0 (0.00%)	25	0 (0.00%)
recognise	104	0 (0.00%)	57	1 (1.72%)	106	0 (0.00%)
spot	16	0 (0.00%)	10	0 (0.00%)	17	1 (5.56%)
witness	10	2 (16.67%)	29	4 (12.12%)	22	1 (4.35%)
Total	362	7 (1.90%)	344	6 (1.71%)	346	5 (1.42%)

In this study, all statistical analyses were implemented using the R statistical package software version 3.03 (R Core Team 2013).¹⁰ First, the overall frequency for the progressive uses of state verbs ('progressive statives', as in Smith 1983: 484) is significantly higher in Indian English than in British English or Irish English (Fisher's exact test; p -value = 0.00011). With a significance level of 0.05, comparisons using Tukey's contrasts found a significant statistical difference between ICE-GB and ICE-IND (mean difference = -0.0046; 95% confidence interval = -0.0075 to -0.0017; p -value < 0.05) and between ICE-IRL and ICE-IND (mean difference = -0.0051; 95% confidence interval = -0.0079 to -0.0022; p -value < 0.05) but not between ICE-GB and ICE-IRL (mean difference = 0.0005; 95% confidence interval = -0.0023 to 0.0032; p -value = 0.92).¹¹ Second, no significant differences were found (Fisher's exact test; p -value = 0.91480) among the three varieties of English regarding the overall frequency of the progressive uses of achievement verbs ('progressive achievements', as in Rothstein 2004: 36–7). Third, in each variety of English, progressive achievements are significantly more frequent than progressive

¹⁰ All statistical tests were carried out using the raw frequency data; in tables 2 and 3, percentages are provided only for ease of comparison. The statistical tests used for this study were two-sided Fisher's exact tests and Tukey's honestly significant difference (HSD) tests.

¹¹ A commentator points out that the exploratory ICE study in section 2.3 suffers from the fact that two of the verbs investigated, namely *know* and *want*, are massively more frequent than any of the others, which introduces an element of lexical bias into the comparisons. An additional alternative calculation of Table 2 without these two verbs (ICE-GB: 0.18%; ICE-IND: 0.31%; ICE-IRL: 0.27%) found no significant differences (Fisher's exact test; p -value = 0.74930) among the three varieties of English regarding the overall frequency of the progressive uses of state verbs.

statives. Using Fisher's exact test, the difference is significant at the 5 per cent significance level in the case of ICE-GB (p -value = 0.00025) and ICE-IRL (p -value = 0.00230), while in the case of ICE-IND (p -value = 0.05498) the difference is significant at slightly higher than the 5 per cent significance level. Tukey's tests, however, revealed that each of the three differences was statistically significant, with a p -value lower than 0.05.

In this and the following paragraphs, the implications of the corpus findings will be discussed. However, care must be taken in interpreting these findings, as only a selected number of verbs were investigated. Let us, for the moment, confine our attention to ICE-GB. The first implication is that the corpus findings provide a rationale for reconciling Vendler's (1957) and Biber *et al.*'s (1999) positions, which is the primary aim of this research. According to Vendler (1957: 146), state and achievement verbs are 'the verbs lacking continuous tenses'. By and large, the corpus data suggest that the ban on progressive statives and progressive achievements does apply to Standard English, as claimed by Vendler (1957). At the same time, they indicate that the claim that certain verbs never occur in the progressive aspect is not strictly true. Indeed, as observed by Dowty (1972, 1979), Mourelatos (1978), Bach (1981) and Biber *et al.* (1999), state and achievement verbs do occur in the progressive, under appropriate conditions. Yet counterexamples to Vendler's (1957) classification constitute only a tiny percentage (about 2% or less) of the overall verb phrases that involve these verbs. The small proportion of the progressive uses of state and achievement verbs was also noted by Mair (2012), whose study was based on the *Corpus of Contemporary American English* (COCA; Davies 2008–).

As this brief investigation of a large digital corpus has shown, it is easy to obtain examples of stative predications being used in the progressive. The same corpora, however, show that such exceptional and contextually licensed uses are usually negligible statistically. For example, COCA contains 10,691 instances of the third-person singular present tense for *love*, but only 55 corresponding progressives.

[...] COCA, with its 400 million plus words of text, has 319 instances of *notices a*, but only two of *is noticing a*, and these exceptions significantly shift the emphasis from sensory perception to intellection [...], and from a one-off act of perception to iteration [...]

(Mair 2012: 814 – 5)

The second implication is that in the case of progressive statives (as in (6a)) and progressive achievements (as in (6b)), there is always a kind of shift in meaning, as suggested by Mair (2012) in the above quote.

- (6) a. Which specific layby **are** you **remembering** (ICE-GB: S1A-011 098)
- b. What we **are witnessing** is a major script revolution, in which a conscious choice of script type appears to have been made for a variety of reasons, not all of which are as yet understood. (ICE-GB: W2A-008 071)

Thus, in (6a) the progressive may indicate temporary state (see section 4.1.1, including footnote 26) or ‘limited duration’ (Palmer 1988: 75), while the progressive in (6b) shifts the emphasis ‘from a one-off act of perception to iteration’ (Mair 2012: 815; see also section 4.1.2).

The third implication concerns the relative difficulty of progressivisation. In each of the three corpora, the ease of progressivisation varies even for verbs of the same Vendler class. This type of indeterminacy is not unique to progressivisation. As Filip (1999: 72) remarks, nouns ‘differ with respect to the ease with which they can shift between count and mass interpretations’. It is beyond the scope of this paper to delve deeper into such gradient dimensions in grammar and provide a full and clear account of the hierarchy of difficulty with regard to progressivisation.

Turning to the differences among the varieties of English, the present findings are largely consistent with previous reports. The relatively frequent occurrence of ‘*be* + *knowing*’ in Indian English was previously noted by Fabb & Durant (1993; cited in the *British National Corpus* (BNC)) and Sharma (2009: 182), among others.¹² The finding that there is no statistically significant difference between ICE-GB and ICE-IRL with regard to progressive statives is in line with the finding by Filppula (1999: 89), who remarks that the use of the progressive with certain types of state verbs is ‘not so much in evidence in the HE [Hiberno-English] corpus as one could

¹² Consider their remark in (i), drawn from the BNC.

(i) Indians in many circumstances write ‘I am knowing the answer’. (BNC: HXH 1642)

Based on ICE-IND and other sources, Sharma (2009) discusses the robust overextension of progressives to statives in Indian English.

have expected on the basis of the literature'.¹³ The use of the progressive in Indian and Irish English will not be of further concern in this study, as ICE-IND and ICE-IRL were used as yardsticks for judging the validity of the findings from ICE-GB. In what follows, we will focus on Standard English.

Finally, of the 20 instances of progressive statives and progressive achievements found in ICE-GB, 55% (11 tokens) were present progressive active (cf. tables A1a and A1b in the Appendix).¹⁴ Hence, in this paper, we concentrate on the present progressive active, ignoring the interaction between tense and the progressive. With regard to this issue, Celce-Murcia & Larsen-Freeman (1999: 122) remark that in the present perfect progressive, such as *I have been wanting to see you*, 'the perfect adds the notion of inception prior to present time and thus signals that the state has history, or duration'. Space limitations also preclude a discussion of issues such as 'the relation between the progressive and the perfective/imperfective distinction' (Mair 2012: 815). To recapitulate, the remainder of this paper will be devoted to reconciling Vendler's (1957) and Biber *et al.*'s (1999) approaches.

3. The underspecification approach

Recall that Van Valin & LaPolla (1997: 93) defines Vendler's (1957) four verb classes in terms of three binary features: [\pm static, \pm telic, \pm punctual]. This is summarised in table 1 presented in section 2.1. Table 1 provides a useful point of departure from which this paper seeks to explore an underspecification approach to the distribution of aspectual progressives in English. A major novelty of the present study is that the features [static], [telic] and [punctual] are not fully specified in lexical entries. That is, certain features are NOT SPECIFIED (i.e. not present or left blank) in the lexicon. More specifically, I propose that in the lexicon, verbs are

¹³ To cite a non-corpus study, Harris (1993: 164) remarks that in Irish English, 'stative verbs, particularly those of perception and cognition, appear quite extensively in the continuous'.

¹⁴ Tables A1a - A1d in the Appendix largely follow the classifications by Smith (2002: 319) and Collins (2008: 231). The only difference is that the *will (shall) + be -ing* construction (future-progressive construction) and its perfect counterpart (*will/shall + have been -ing*) construction are separated from the 'modal + *be -ing*' construction and the corresponding perfect counterpart. Following Wada (2013: 391), *shall* is treated as a variant of *will*, but in tables A1a - A1d, all the attested instances of future-progressive or future-perfect-progressive constructions include *will* only.

underspecified as to aspectual types in the following way:

Table 4. Underspecified verb classes

Aktionsart Features	State	Activity	Accomplishment	Achievement
[static]		-	-	-
[telic]	-			
[punctual]	-	-	-	

The key point here is that there is a difference between feature specification at the verb level (underspecified) and feature specification at the sentential level (fully specified). If we compare table 1 and table 4, the central claims in the present study can be put as follows:

- (7) As far as aspectual features ([static], [telic] and [punctual]) are concerned, the lexical entries of verbs are characterised exclusively in ‘-’ or unmarked values. Hence, plus-valued features are not specified in the lexicon.

In order to expand the differences between table 1, proposed originally by Van Valin & LaPolla (1997: 93), and table 4, proposed in this paper, let us consider table 5. Table 5 is an exact copy of table 1, with the differences between table 1 and table 4 marked.

Table 5 (= annotated version of table 1). Vendler’ s (1957) verb classes
(Van Valin & LaPolla 1997: 93)

Aktionsart Features	State	Activity	Accomplishment	Achievement
[static]	+ ^a	-	-	-
[telic]	-	- ^c	+ ^a	+ ^b
[punctual]	-	-	-	+ ^a

^a Distinctive features: see (8).

^b See (9a).

^c See (9b).

Now the first question that must be asked is why the features in table 1 (or table 5) do not appear in table 4. The notion of underspecification is primarily motivated by consideration of economy, as the following quote shows:

Underspecification relies on two theoretical constructs present in most versions of linguistic theory. First, the ‘primitives’ posited in the theory combine freely. Second, *representations include only necessary and sufficient information*. With respect to underspecification, ‘feature specifications’ are the primitives. [...] *If a feature specification is not necessary in a representation, it is not present*: in this way, the representation is underspecified.

Further, underspecification allows the simplification of the formal representation of different phenomena, a direct result of having fewer features in representations. (Archangeli 1994: 4829; emphasis added)

Having considered the conceptual background of underspecification, let us now examine a conventional assumption about underspecification: the intuition underlying the use of underspecification is that particular features are not DISTINCTIVE.¹⁵ In the present context, the distinctive features of the Aktionsart inventory presented in table 1 (or table 5) are as follows:

(8) *Distinctive features*

- a. states: [static]
- b. achievements: [punctual]
- c. accomplishments: [telic]

As shown in table 1 (or table 5), what distinguishes states from the other three

¹⁵ The term ‘distinctive feature’ is generally used in the domain of phonology. Consider, however, the following quote:

[T]he primary role of a set of ‘distinctive features,’ as a descriptive device, is *to identify uniquely – to distinguish* – each of the members of a given system. In this general sense, of course, the concept may apply to elements in any domain [...] Within linguistics itself it is perfectly appropriate to talk of distinctive features in syntax or semantics. (Brasington 1994: 1042; emphasis added)

classes is the property [static] (cf. footnote 15 for the role of distinctive features). Therefore, [telic] and [punctual] are not distinctive features in the case of states. Likewise, the feature [punctual] makes achievements distinctive. As for accomplishments, [telic] is the distinctive feature.¹⁶ Notice also that in all three classes examined, their distinctiveness is realised by the presence of a '+' value. Since this study distinguishes between two levels of aspectual feature specification (i.e. an underspecified verb level and a fully specified sentential level), I assume that these distinctive features are *not* specified in lexical entries, thereby incorporating the insight that factors other than the verb itself may influence aspectual classification.

Turning to the issue of markedness, in this paper I also assume that unmarked features are realised by a '-' value rather than by no value at all.¹⁷ Notice, in this connection, that the Jakobsonian notion of markedness is inverted in the present account. That is, in general, marked values are represented in lexical entries and unmarked values are left blank. Yet in the present approach, the '+' value is the value that defines aspectual type, but it is lexically underspecified, as shown in table 4. The fact that in the present approach, only minus-valued features are specified does not pose a problem at all. As Blevins (2000: 243) notes, '[i]t is not necessary, or, for that matter, desirable, to insist that *only* marked values are present in lexical entries, as in approaches that adopt a version of "radical underspecification" (Archangeli 1988)' [emphasis in original].¹⁸

¹⁶ Comrie (1976: 44) notes that '[t]he term "telic situation" corresponds to the term "accomplishment" used, for instance, by Vendler [(1957: 146)]'.

¹⁷ Markedness refers to 'the asymmetric relationship between two choices, whether in phonology, morphology, syntax, or semantics' (Waugh & Lafford 1994: 2378). In binary oppositions (contrasts), 'the specialized element is said to be marked, the more general one unmarked' (ibid.). In this study, verbs are differentiated by binary features: [static], [telic] and [punctual]. The two values of each feature do not stand on an equal footing with each other: one is marked, the other unmarked. Marked features are [+static], [+telic] and [+punctual], whereas unmarked features are [-static], [-telic] and [-punctual].

The use of '-' to represent unmarked values of binary-valued features follows, among others, Wunderlich & Fabri (1995: 252), who credit Jensen & Stong-Jensen (1984: 476). This tradition actually goes back to the Prague School structural phonologists Trubetzkoy and Jakobson.

¹⁸ One may question the justification for unspecifying the distinctive features – which have a marked '+' value in my approach –, because non-distinctive (i.e. non-contrastive) features are typically unspecified, as in approaches that adopt a version of contrastive underspecification. There are different versions of underspecification. For example, Archangeli (1994) mentions four approaches to phonological underspecification: radical underspecification, contrastive underspecification, monovalence and combinatorial underspecification. Outside the domain of phonology, there are also a variety of approaches to underspecification. For instance, with regard to underspecification

At this point, one might object that ‘+’ and ‘-’ are arbitrary, since any feature [+static] is equivalent to a [-dynamic] feature, so that if one changes the orientation or ‘spin’ of the feature names, one inverts the markedness relations. My response to this objection is as follows. As mentioned earlier, the present account uses the features from Van Valin & LaPolla (1997: 93) to define Vendler’s (1957) four verb classes. Unlike the features employed by other scholars, such as [±change, ±bound, ±duration] (Kearns 2000: 204) and [±homogeneous, ±progress] (Naumann 2001: 28), the features [static], [telic] and [punctual] are established in this literature and provide perhaps the clearest rationale that one can offer for representing some properties by ‘+’ and others by ‘-’.

More important reasons for sticking to the three features [static], [telic] and [punctual] can be adduced by considering alternative combinations of some binary features. Consider first the combination of the three features [dynamic], [telic] and [punctual] (cf. table A2a in the Appendix). In table A2a, the [-dynamic] feature of states and the [+punctual] feature of achievements are incompatible with the ongoingness property of the progressive aspect. A feature analysis in which the features that define some special properties (e.g. the incompatibility with the progressive aspect) are uniformly realised by the presence of a marked ‘+’ value is clearly superior to analyses in which they are not (cf. footnote 17 on the relation between a specialised element and a marked ‘+’ value). Second, Rothstein’s (2004) classification in terms of two features, [±stages, ±telic], fails to identify a *single* distinctive feature for each Vendler class (cf. table A2b in the Appendix). In other words, it does not provide an answer to a question such as the following: what is the one particular quality that determines the contrast between states and the other three classes? Finally, Brinton’s (1988) use of four features necessarily violates Occam’s razor (cf. table A2c in the Appendix). Surely it is more parsimonious to derive Vendler’s quadripartition using three rather than four features. In sum, there

in morphology, Lumsden’s (1992) approach differs from that of Farkas (1990); the former argues for strictly binary grammatical features, whereas the latter abandons the binary feature system. For another, discussing first language acquisition, Hyams (1996: 116) notes that one difference between phonological underspecification and grammatical underspecification is that “underspecified phonological segments get filled in, while underspecified functional heads do not.” In this paper, I take the position that the decision to specify or not specify certain features is dependent upon what one wants to explain with the feature specification. In order to account for the interaction of the progressive aspect and Aktionsart, I propose that table 4 meets the *necessary and sufficient* criterion applied to the verb level.

are indeed sufficient grounds for sticking to the three features [static], [telic] and [punctual].

A few additional remarks may be in order with respect to table 4. In table 5, there are two features with the superscripts ‘b’ and ‘c’, respectively. The following explains why these features in table 5 do not appear in table 4.

- (9) a. The feature [telic] of achievements is left unspecified because it is a marked feature.
- b. The feature [telic] of activities is left unspecified because the basic premise of this approach is that verbs are partially underspecified for aspectual type in the lexicon.

First, the feature [telic] of achievements is a marked feature in the sense that it has a ‘+’ value (see table 1 or table 5). Thus, it is left unspecified although it is not a distinctive feature.¹⁹ Recall that in the present approach, plus-valued features are not specified in the lexicon (see corollary (7)).

Second, the feature [telic] of activities is an unmarked one in the sense that it has a ‘-’ value (see table 1 or table 5), but it is left unspecified because the basic premise of this approach is that verbs are partially underspecified for aspectual type in the lexicon. A benefit of leaving this particular feature unspecified in lexical entries is provided below.

As shown in table 4, by leaving the [telic] feature of activities unspecified, activity verbs and accomplishment verbs are not distinguished in the lexicon (see also footnote 35). This captures the fact that a verb can be taken as either an activity or an accomplishment depending on its arguments and/or the adverbial it combines with. As the examples in (10) illustrate, the verb *eat* in *eat popcorn* is an activity, whereas that in *eat two apples* is an accomplishment.

- (10) a. John ate popcorn. (activity/atelic)
- b. John ate two apples. (accomplishment/telic)

(Filip 2012: 734)

¹⁹ The distinctive feature of achievements is [punctual] (see (8b)). That is, what distinguishes achievements from the other three classes is the property [punctual].

- Examples like (10)–(11) have been adduced in the literature as evidence showing that aspectual classes are predication types rather than verb types. Yet, the present approach provides a means of accommodating counterexamples to the claim that the Vendler classification applies to verbs.²⁰ In the lexicon, verbs such as *eat* and *read* have the features [-static, -punctual] and therefore at the verb level, it remains uncertain whether they are an activity or an accomplishment. As for the feature [telic] that is left unspecified in the lexicon, the particular value is resolved by the use of complements (*popcorn* vs. *two apples*), as in (10) or adverbials (*for two hours* vs. *in two hours*), as in (11). Consequently, at the sentential level, *eat* in (10a) and *read* in (11a) are activity verbs having the feature [-telic], whereas *eat* in (10b) and *read* in (11b) are accomplishment verbs having the feature [+telic].

20 Consider the following passage:

[...] Vendler's analysis basically works at the lexical level (cf. Verkuyl 1993: 33), though it also involves predicates rather than simply verbs alone. As such, Vendler has to put *run* and *walk* under the category of activity, and *run a mile* and *walk to school* under the category of accomplishment. With the three traditional parameters [the three binary features] alone, a double entry for the same verb in the lexicon is inevitable, thus making the lexicon unnecessarily large. Furthermore, Vendler's verb-based approach not only obscures the fact that we are talking about a single verb (cf. Lys & Mommer 1986: 216), it is also inadequate as an account of aspectual meanings arising from arguments and non-arguments (e.g. *read* vs. *read a book*[]). (Xiao & McEnery 2004: 326–7)

²¹ That is, in the present approach, a single marked element induces a feature resolution.

Admittedly, the underspecification account proposed in this paper is rather limited in its explanatory scope. Despite limitations and possible shortcomings, however, it can successfully account for the interaction between the progressive aspect and Aktionsart, as will be discussed in the following sections.

4. Aspectual type-shift and underspecification

In section 2, we examined two apparently conflicting views concerning the distributional constraints on aspectual progressives in English: Vendler's (1957) Aktionsart-based account and Biber *et al.*'s (1999) frequency-based account. Yet these alternatives should not be seen as challenges to each other. Rather, they suggest the possibility of a unified account, provided that we acknowledge the phenomenon of 'aspectual type-shift' (Michaelis 2003), also known variously as 'aspect shift' (de Swart 1998, Zucchi 1998), 'situation type shift' (Smith 1997), 'aspectual type coercion' (Moens & Steedman 1988) and 'aspectual coercion' (Michaelis 2004). I would note in passing that the term 'aspect shift' is somewhat misleading, because what is involved in this kind of shift is not aspect *per se* but Aktionsart. As for the term 'coercion', I reserve it for referring to a particular strategy that deals with this phenomenon (see section 5.2).

The first part of this section is mainly descriptive and discusses the main types of aspectual type-shifts in the domain of the progressive aspect. These comprise shifts from achievements as well as those from states. The second part considers how the underspecification approach deals with aspectual progressives in English involving an aspectual type-shift.

4.1 The phenomenon of aspectual type-shift

4.1.1 Shifts from states

Let us begin with shifts from states. Recall that it is the [+static] feature of state verbs that is inconsistent with the progressive aspect. If a verb with a [+static] feature is reassigned a '-' value, the former state verb turns out to be an activity verb and thus may occur in progressive constructions. Following Huddleston (2002:

167), among others, one can distinguish at least three cases in which this sort of shift is triggered: (i) ‘waxing or waning situations’ (borrowing terminology from Brinton 1988: 40 and Huddleston 2002: 167, among others), (ii) agentive activity and (iii) temporary state.²² In what follows, I consider three such subtypes in turn.

The first case of state-to-activity shift is triggered by expressions like *more and more*, *less and less* and so on, hence the name ‘waxing or waning situations’. Representative examples are given below.²³

(12) *Waxing or waning situations*

- a. I’m **liking** the idea of this **more and more!** (BYU-BNC: KSV)

²² Leech *et al.* (2009: 129) also discuss three possible cases of such shift. Consider the following passage:

[I]n PDE [Present-Day English] there are a number of environments in which verbs that are normally stative can occur in the progressive. These include temporary states, as in [(ia)]; states changing by degrees, as in [(ib)]; and cases where the verb *be* is used agentively, as in [(ic)]. In each case the situation no longer represents a pure state.

- (i) a. Mary’s **living** in a flat in London.
 b. The baby’s **resembling** his father more and more every day. (Sag 1973: 88)
 c. John’s **being** silly.

(Leech *et al.* 2009: 129)

A commentator suggested that cases like (ic) (‘agentive activity’, as in Huddleston 2002: 167) could be explained by arguing for a dynamic stative class of predicates (temporary states). However, in this paper, ‘agentive activity’ and ‘temporary state’ are distinguished. The former pattern is applied to agentive *be* only, while the latter is usually reserved for cases involving ‘stance verbs’ (Quirk *et al.* 1985: 205–6) such as *live*, *lie*, *sit*, and *stand*. For details, see (13)–(14).

²³ In this section, the relevant data are taken from large-scale corpora such as the *British National Corpus* (BYU-BNC; Davies 2004–) and the *Corpus of Contemporary American English* (COCA; Davies 2008–). The abbreviations used in the text identifier codes are as follows:

- (i) *BYU-BNC*
 a. S: spoken
 b. W: written
 c. conv: conversations
 (ii) *COCA*
 a. ACAD: academic
 b. FIC: fiction
 c. MAG: popular magazines
 d. NEWS: newspapers
 e. SPOK: spoken

S_conv)

- b. With the Internet and satellite TV, people **are understanding more and more** every day, (COCA: 2004 NEWS)
- c. Distribution **is costing more**, and a lot of firms are finding they are not of sufficient size to compete. (COCA: 1995 NEWS)
- d. This idea **is seeming less and less** crazy and **more and more** desirable, (COCA: 2002 NEWS)
- e. every year **less and less** people **are believing** in Santa, (COCA: 2003 FIC)
- f. **more** blacks **are owning** their own businesses, (COCA: 1995 NEWS)
- g. It's **tasting older** after 30 minutes, getting richer and fuller. (COCA: 2005 NEWS)

As Baker (1995: 582) remarks, sentences such as the above denote 'a state that is changing in some way, rather than a state that is staying the same'. That is, the verbs in question are not [+static] but [-static], and hence are activities, since they entail a change of state (cf. Kučera 1981: 185, Palmer 1988: 72).

Next, discussing the examples in (4b) and (5) in section 2.2, we have already seen a second sort of '[+static]-to-[-static]' shift, namely agentive activity. Recall that the verb *be* may be used as a dynamic verb when there is a sense in which it is interpreted agentively. To put it more specifically, if the verb *be* is associated with agentivity, the feature [static] of this verb is shifted from a '+' value to a '-' value, yielding an activity verb with the feature combination of [-static, -telic, -punctual]. This makes sense because in such cases the verb *be* may be paraphrased with an activity verb like *act*, as noted in section 2.2. Consider the following:²⁴

²⁴ A commentator wonders how one decides in the case of examples such as those in (13) that *be* has an agentive meaning. '*Be being* + predicative adjective/noun' constructions express 'the idea that the behavior of the subject is not his or her usual behavior' (Cowan 2008: 363). Let us examine the minimal pair in (i) - (ii). A consideration of the discourse contexts easily reveals that only the progressive construction in (i) conveys 'the notion of a change from the norm' (Cowan 2008: 363).

- (i) I almost always come when called, but if you're ever shouting for me and **I'm being stubborn**, try calling me by my nickname, (COCA: 2011 MAG)
- (ii) We probably have to move everything from that upper shelf in the house to a lower shelf because Brian knows me. If it's up there and I want it, I'll probably try to climb up and get it, and that will annoy him, because **I'm stubborn**. (COCA: 2007 SPOK)

(13) *Agentive activity*

- a. I'm not **being** silly. (BYU-BNC: KBH S_conv)
- b. But he's **being** deliberately obstructive. (BYU-BNC: GWB W_fict_prose)
- c. when you do tend to be aggressive it's not because you're **being** aggressive on purpose (BYU-BNC: JND S_unclassified)
- d. He's **being** polite. (COCA: 1994 FIC)
- e. Why **are** you **being** so evasive? (COCA: 2011 FIC)
- f. I'm **being** an idiot, (BYU-BNC: HHB W_fict_prose)
- g. I know I'm **being** a baby. (COCA: 2004 FIC)

Another case of state-to-activity shift can be found with 'stance verbs' (Quirk *et al.* 1985: 205–6) such as *live*, *lie*, *sit* and *stand*, which may be used with the progressive to express a temporary state. The examples in (14) are representative.

(14) *Temporary state*

- a. We **are living** in a cultural wilderness at the moment. (BYU-BNC: ECT W_pop_lore)
- b. One drawer of a chest is still open, a clothes hanger **is lying** under the bed. (COCA: 1997 FIC)
- c. A record player **is sitting** near the storefront window, a makeshift microphone placed in front of it. (COCA: 1990 FIC)
- d. We're here, and that man **is standing** over there. (COCA: 2010 FIC)
- e. At the moment the filter **is resting** on a flowerpot to keep its top above water and complete the wet and dry circuit. (BYU-BNC: C95 W_pop_lore)
- f. Her dress **is hanging** on the door. (COCA: 1994 FIC)

According to Michaelis (2004: 36), temporary states are activities.²⁵ Huddleston (2002: 167–8) also notes that '[t]he link between temporariness and dynamicity is that a temporary state can be thought of as moving – “progressing” – towards its endpoint'. In sum, the verbs in (14) are [-static].

²⁵ To be precise, Michaelis (2004: 36) suggests that temporary states are 'homogeneous activities'.

Note, in this connection, that Biber *et al.* (1999: 472) classify *live*, *sit* and *stand* as ‘verbs referring to *static* physical situations’ [emphasis added], verbs that are barred from occurring in the progressive aspect under Vendler’s (1957) approach. Yet their findings indicate that these three verbs belong to the set of verbs ‘frequently occurring with the progressive aspect (more than ten times per million words)’ (Biber *et al.* 1999: 472). This explains partly why Biber *et al.* (1999: 472) remark that ‘both dynamic and stative verbs are included among the most common verbs in the progressive’.

To close this section, there are at least three cases in which shifts from states may happen. This is summarised in (15).

(15) *Shifts from states: state-to-activity shifts*

a. *Waxing or waning situations*

I’m liking the idea of this more and more! (= (12a))

b. *Agentive activity*

He’s being polite. (= (13d))

c. *Temporary state*

We are living in a cultural wilderness at the moment. (= (14a))

Cases involving agentive activity concern the copula *be*, and progressive constructions describing temporary states include but are not limited to stance verbs.²⁶

4.1.2 Shifts from achievements

Having looked at shifts from states, let us now consider shifts from achievements. As discussed earlier, the problem with an achievement in a progressive construction stems from a conflict between the existence of its [+punctual] feature and the ongoingness property of the progressive aspect. Therefore, the simplest way of resolving this conflict is obliterating the punctuality character by reassigning a ‘-’ value to a verb with the feature [+punctual]. If that happens, the verb in question is

²⁶ For example, consider (6a) as well as the following example:

(i) Let me say, I don’t think that the people out there who **are belonging** to these organizations are very fairly represented – are very fairly informed by them. (COCA: 1990 SPOK)

no longer an achievement and thus may occur with the progressive. There are at least three cases in which this sort of shift may happen: (i) iteration, (ii) ‘extendable achievements’ (borrowing terminology from Huddleston 2002: 121) and (iii) inception of an event. These three subtypes are taken up in this section in turn.

First, there is a special subclass of achievement verbs called ‘semelfactives’ by Smith (1997): *nod*, *knock*, *kick* and so on. With these verbs, the progressive gives the meaning of iteration, as in (16).

(16) *Iteration*

- a. Professor Lock **is nodding** his head. (BYU-BNC: JAD S_pub_debate)
- b. Somebody **is knocking** on the door, hard. (COCA: 1995 FIC)
- c. This little older boy **is kicking** this child in the head. (COCA: 1991 SPOK)

As Huddleston (2002: 123) observes, ‘[w]ith iterative multiplicity, the subsituations [...] are achievements, but the overall situation is an activity’. Adams (1999: 96) also treats ‘iterative events as activities’. That is, the verbs in (16) are activities having the feature [-punctual].

Next, the term ‘extendable achievements’ is coined by Huddleston (2002: 121) in order to cover achievement verbs that may have an extended process leading to a culmination, as in (17).

(17) *Extendable achievements*

- a. The girl **is dying**. (BYU-BNC: CE5 W_fict_prose)
- b. The first plane **is landing**. (COCA: 1990 FIC)
- c. A police car **is arriving** at the truck stop. (COCA: 1997 FIC)
- d. The Unit’s files have vanished, like Summerchild’s personal file.
What I **am finding** is the remains of another file altogether – one kept by Serafin, which contains all the communications he received. (BYU-BNC: J17 W_fict_prose)
- e. Slowly, though, I **am finding** spaces where all my identities can be expressed and even celebrated. (COCA: 2000 ACAD)

As Adams (1999: 95) remarks, the verb *find* has ‘a characteristic process of “searching” that normally leads to the resulting “found” state’. This is in sharp contrast to the so-called ‘strict achievements’ (Huddleston 2002: 121) like *notice* and *recognise*. Notice also that the difference between extendable and strict achievements lies solely in the value of the feature [punctual]. That is, extendable achievements are accomplishments with the feature combination of [-static, +telic, -punctual].²⁷

Finally, some achievement verbs may occur in progressive constructions provided that they have an inceptive reading, as in (18).

(18) *Inception of an event*

- a. Indeed, tourism officials **are realizing** the potential of such visitors.
(COCA: 2002 MAG)
- b. Rachel **is falling asleep**, listening to the faint murmuring voices of her father and the Grandmother, when she hears the noise. (COCA: 2006 FIC)

The examples in (18) are understood to mean ‘coming to realise’ and ‘going to sleep’, respectively. Accordingly, the verbs in (18) are regarded as accomplishments having the feature [-punctual].²⁸ The reason why these verbs are [-punctual] becomes evident considering the fact that the resulting ‘realised’ state or the activity of sleeping continues at least for a limited period of time.

To close the discussion in this section, shifts from achievements comprise (i) achievement-to-activity shifts and (ii) achievement-to-accomplishment shifts. This is summarised in (19)–(20).

(19) *Shifts from achievements (i): achievement-to-activity shifts*

- *Iteration*

²⁷ Adams (1999: 95–6) also claims that extendable achievements are accomplishments. The [+telic] feature of extendable achievements should be understood as meaning that these verbs have the potential of leading to an end result. For example, ‘*He was dying*’ implicates that he would subsequently die and entails that he had not (yet) died’ (Huddleston 2002: 122).

²⁸ Note that you can say ‘How long did it take for Rachel to fall asleep?’ (a test for accomplishments). However, you cannot say ‘How long did it take for Professor Lock to nod his head?’ (cf. (16a)). Thus, the examples in (16) are clearly activities, and those in (18) are accomplishments.

She is knocking on the door. (cf. (16b))

(20) *Shifts from achievements (ii): achievement-to-accomplishment shifts*

a. *Extendable achievements*

A police car is arriving at the truck stop. (= (17c))

b. *Inception of an event*

She is falling asleep. (cf. (18b))

This completes the general discussion of aspectual type-shift. In the next section, I present an underspecification account of aspectual progressives in English, including those involving an aspectual type-shift.

4.2 The resolution of unspecified feature values

Let us begin by recapitulating the leading ideas of the present account.

(21) *The leading ideas of the present account*

- a. Verbs are partially underspecified for aspectual type in the lexicon.
- b. The value of any unspecified feature F is resolved once in a given context by the use of certain adverbials and so on.

In (21b) the term ‘context’ is used in a broad sense and includes the grammatical and semantic context of a sentence.

In section 4.1, we discussed cases where verb types undergo shifts. However, in this section, the same phenomena are explained in terms of cases where verbs undergo feature resolutions. In the present account, it is not a matter of *shifting* features since verb types are underspecified in the lexicon. For the sake of convenience, however, I continue to use the term ‘aspectual type-shift’ when referring to the phenomenon itself (e.g. (15), (19)–(20)).

As shown in (21), the important point is that there is a difference between feature specification at the verb level (underspecified) and feature specification at the sentential level (fully specified). A crucial question arises as to exactly how the process of specification of aspectual features works. I suggest that an override mechanism such as (22), which I dub the ‘principle of overriding of default values’, is responsible for how values for unspecified features are resolved during the process

of moving up from the verb level to the full sentential level.

(22) *The principle of overriding of default values*

The grammatical [and semantic] context provided by the individual utterance overrides the default preferences of the grammatical system.
(Mair 2012: 814)

Just as coercion (see footnote 39 in section 5.2) is ‘syntactically and morphologically invisible’ (de Swart 1998: 360), so is the override mechanism, stated in (22). Under (22), a default value is selected at the sentential level if there is no trigger for the override mechanism. On the other hand, if there is a trigger for the override mechanism, then a non-default value is selected at the sentential level. A default value of any unspecified feature F is set by putting the verb under consideration in the following test frame: (i) the verb must be in the past tense and (ii) the aspect of the verb must be simple (i.e. non-progressive) (cf. Lys & Mommer 1986: 218, Xiao & McEnery 2004: 338).²⁹ The simple past tense is selected as a test frame because in English it applies to all aspectual classes alike (cf. de Swart 1998: 365). The specific triggers involved in the process of specification of aspectual features are summarised in (23).³⁰

(23) *Triggers for the override mechanism*

- a. *Waxing or waning situations* (e.g. (12)): Comparative expressions
- b. *Agentive activity* (e.g. (13)): The agentivity element of the verb *be*
- c. *Temporary state* (e.g. (14)): Temporary time reference
- d. *Iteration* (e.g. (16)): Iterative interpretation
- e. *Extendable achievements* (e.g. (17)): Process interpretation
- f. *Inception of an event* (e.g. (18)): Inceptive interpretation

To see how context determines unspecified feature values, let us first take a

²⁹ Thus in a sense, the underspecification approach proposed in this paper is a combinatorial mechanism involving both underspecification and default interpretations.

³⁰ The list of triggers is not exhaustive. The triggers in (23) are based on the six representative cases examined in this paper. Admittedly, as an anonymous reviewer points out, triggers such as (23d – f) involve a circular logic. In section 5.2, I criticise de Swart (1998) for not explicitly mentioning what the triggers are. This paper improves on that situation by providing a list.

representative minimal pair, as in (24).³¹

- (24) a. John resembles his father.
 b. John is resembling his father more and more as each day goes by.

In both (24a) and (24b), the verb *resemble* is specified in the lexical entry as [-telic, -punctual], but underspecified for [static], whose default value is '+'. In (24a), [+static] is selected at the sentential level by default. In (24b), however, [-static] is selected at the sentential level because of the trigger *more and more* (cf. (22)). As a result, the verb *resemble* in (24b) is an activity at the sentential level (i.e. after the features have been resolved). Once the unspecified feature values are resolved, further overriding of a fixed value is not possible. In short, underspecification allows a one-level override and nothing more. I return to this point in section 5.1.

It is important to note that in the present account, the factor that triggers the resolution of an unspecified feature value varies case by case (cf. (23)). For example, whereas in (24b), the triggering element is the adverbial *more and more*, in (13), it is the agentivity element of the verb *be*. With regard to the latter, notice that stative predicates like *tall* or *bald* are resistant to an agentive interpretation. This is illustrated in (25).

- (25) *Dana is being tall/fat/a doctor. (Van Valin 2005: 36)

As there is no trigger in (25), the possibility that the verb *be* could have the [-static] feature at the sentential level is excluded from the beginning and hence (25) is ungrammatical.

Let us now consider another minimal pair.³²

- (26) a. He nods his head in agreement.
 b. He is nodding his head in agreement.

³¹ (24b), which is taken from Zucchi (1998: 350), is an example of a waxing or waning situation, as discussed in section 4.1.1.

³² (26b), which is taken from Celce-Murcia & Larsen-Freeman (1999: 120), is an example of iteration, as discussed in section 4.1.2.

In both (26a) and (26b), the verb *nod* is specified in the lexical entry as [-static]. The other features are not specified (see table 4). In (26a), the features [+telic, +punctual] are selected at the sentential level by default. In (26b), however, due to its iterative interpretation, the features [-telic, -punctual] are selected at the sentential level (cf. (22)).³³ As a result, the verb *nod* in (26b) is an activity at the sentential level. Notice also that the resolution of [punctual] feature and that of [telic] feature take place at one and the same level, thereby conforming to the general pattern (i.e. the inability to keep trumping; for more details, see section 5.1).

Next, let us turn to a minimal pair involving extendable achievement. Under the lexical ambiguity approach (see section 5.2), the verb *die* has two uses, one as an achievement (DIE_{ACHIEVEMENT}), as in (27a) and one as an accomplishment (DIE_{ACCOMPLISHMENT}), as in (27b).

- (27) a. She died at 5:32.
b. She is dying. [a slow death]

Under the underspecification approach, in both (27a) and (27b), the verb *die* is specified in the lexical entry as [-static], but underspecified for [telic] and [punctual]. In (27a), the features [+telic, +punctual] are selected at the sentential level by default. In (27b), however, due to its process or durative interpretation, the features [+telic, -punctual] are selected at the sentential level (cf. (22)).³⁴ If we consider two levels, the lexical level and the sentential level, we can maintain a three-way distinction between pure or lexical accomplishments, pure or strict achievements and extendable achievements. This is summarised in table 6.³⁵

³³ Recall that iterative events are activities.

³⁴ Recall that extendable achievements are accomplishments.

³⁵ In table 6, the verb *create*, which is a pure or lexical accomplishment (cf. Brinton 1988: 29), is specified in the lexical entry as [-static, -punctual], but underspecified for [telic], whose default value is '+'. In a sentence such as *She is creating a new sculpture*, [+telic] is selected at the sentential level by default. Now consider (i).

(i) The earth is orbiting around the sun. (Van Valin 2005: 34)

In (i), the verb *orbit*, which is a pure or lexical activity, is specified in the lexical entry as [-static, -punctual], but underspecified for [telic], whose default value is '-'. In (i), [-telic] is selected at the sentential level by default (cf. table 7). Under the underspecification approach, there is neutralisation of activities and accomplishments at the lexical level. However, verbs that are

Table 6. A comparison of accomplishment, achievement and extendable achievement (= (20a))

	(pure or lexical) accomplishment <i>She is creating a new sculpture.</i>	(pure or strict) achievement <i>She died at 5:32.</i>	extendable achievement <i>She is dying.</i>
lexical level	[-static, -punctual]	[-static]	[-static]
sentential level	[-static, +telic, -punctual]	[-static, +telic, +punctual]	[-static, +telic, -punctual]

Likewise, we can maintain a tripartite distinction between the following:

Table 7. A comparison of activity, achievement and iteration (= (19))

	(pure or lexical) activity <i>The earth is orbiting around the sun.</i>	(pure or strict) achievement <i>She died at 5:32.</i>	iteration <i>She is knocking on the door.</i>
lexical level	[-static, -punctual]	[-static]	[-static]
sentential level	[-static, -telic, -punctual]	[-static, +telic, +punctual]	[-static, -telic, -punctual]

As shown in tables 6 and 7, in the present account, it is only at the sentential level that the verb features are filled in.

Thus, the underspecification approach proposed in this paper is in line with the “two-level model of situation aspect [Aktionsart] in which situation aspect is modeled as verb classes at the lexical level and as situation types at the sentential level” (Xiao & McEnery 2004: 325).³⁶ Xiao & McEnery (2004: 325–6) further remark:

underspecified for [telic] at the lexical level are specified for [telic] at the sentential level. That is, at the sentential level, there is no neutralisation of activities and accomplishments.

³⁶ Consider the following passage:

Our two-level approach to modelling situation aspect is primarily motivated by the deficiencies inherent in these analyses. The Vendlerian approach works well at the lexical level, but not at the sentential level. Conversely, the approach of Smith [(1997)] works well at the sentential level but not at the lexical level. Our two-level approach to situation aspect seeks to bridge this gap, operating at both the lexical and the sentential levels. (Xiao & McEnery 2004: 331)

At [the lexical] level, verbs alone are considered. An essential concept that enables us to do this is NEUTRAL CONTEXT. [...] a neutral context is a simple clause in which everything that might change the aspectual value of a verb is excluded [...]

Sentential-level situation aspect is the composite result of the interaction between verb classes and complements [...], arguments [...], and non-arguments such as peripheral adjuncts [...] and viewpoint aspect [...]
(Xiao & McEnery 2004: 325 – 6)

Finally, it should be noted that underspecification does not totally obliterate the distinction between the four aspectual types. That is, under the underspecification approach, the categories states, activities, accomplishments and achievements are still necessary. This can be shown by analogy with the count/mass distinction for nominals. Consider the shifts between count and mass nouns, as illustrated in (28).

- (28) a. I ordered two coffees with rum at the bar (BYU-BNC: HTL
W_fict_prose)
b. I drink too much coffee (BYU-BNC: KDM S_conv)

Concerning this sort of shift, Filip (1999: 72) remarks:

[S]uch shifts do not force us to abandon the lexical distinction between mass and count. Rather, nouns are viewed as having the potential to be used either as count or mass nouns, and they differ with respect to the ease with which they can shift between count and mass interpretations.

To conclude this section, consideration of countability in nouns suggests that resolvable underspecification is a pervasive lexical phenomenon and is not confined to aspect.

5. Extensions

5.1 A comparison with Verkuyl's (1993) compositional approach

This section considers one of the key characteristics of the present account, namely the inability to keep trumping, discussed briefly in section 3 and section 4.2. The present approach differs from the compositional approach (e.g. Verkuyl 1993), as the latter allows higher levels to keep trumping lower ones, which is difficult to justify. Verkuyl's approach rests on the premise that 'aspectual values are built compositionally in a bottom-up fashion' (Dimitrova-Vulchanova 2012: 939). According to Verkuyl, the aspectual nature of a sentence does not depend on the verb alone. Rather, it is determined by the verb and its internal and external argument NPs. His compositional approach is expressed in terms of the 'Plus-principle'. Simply put, his Plus-principle refers to 'the restriction on terminativity as requiring only plus-values' and '[i]t implies that terminativity (boundedness, telicity) is a marked aspectual compositional property of a sentence' (Verkuyl 2012: 572). To see how Verkuyl's (1993) Plus-principle works, let us take as an example the verb *eat*, which is [-telic] at the lexical level. At the VP-level, however, the '-' value of the feature [telic] may be overridden by a '+' value, as in the verb phrase *ate a sandwich*. This newly-resolved [+telic] ('[+T(terminative)]'), as in Verkuyl 1993: 22) feature may still be replaced by the [-telic] feature at the S(sentence)-level, as in the sentence *Nobody ate a sandwich*.³⁷

In contrast, in the present approach, the distinction between (29a) and (29b) is explained in the following way.

- (29) a. Judith ate a sandwich.
b. Nobody ate a sandwich.

³⁷ The discussion of Verkuyl's (1993) Plus-principle is simplified for present purposes. The actual features used in the Plus-principle are given in (i) below.

- (i) a. [-ADD TO] verbs: state verbs
[+ADD TO] verbs: process and event verbs (where [+ADD TO] stands for 'additivity')
b. [+SQA]: Specified Quantity of A, where A is the denotation of the head noun N of the NP
c. [+T]: terminative
[-T]: durative

In the lexicon, the verb *eat* has the features [-static, -punctual] and therefore at the verb level, it remains uncertain whether *eat* is an activity or an accomplishment. As for the feature [telic] that is left unspecified in the lexicon, the particular value is resolved by the use of the decisive element (*a sandwich* in the case of (29a) and *nobody* in the case of (29b)).³⁸ Consequently, at the sentential level, *eat* in (29a) is an accomplishment verb having the feature [+telic], whereas *eat* in (29b) is an activity verb having the feature [-telic]. In short, the present approach regards resolution as something that applies once to an utterance. Furthermore, the present approach is superior to the compositional approach in terms of empirical coverage because Verkuyl (1993: 14) does not deal with sentences containing both an object and an adverbial (e.g. (11)), ‘in the absence of a sufficiently articulated theory of adverbial modification’.

5.2 Supporting arguments

Previous attempts to account for the phenomenon of aspectual type-shift include one that explains it in terms of lexical ambiguity and another that is based on ‘coercion’ operation. Under the lexical ambiguity approach, which is mentioned by Dowty (1979: 60–2), among others, aspectual type-shift is accounted for at the lexical level by postulating distinct lexemes, such as RESEMBLE_{STATE} and RESEMBLE_{ACTIVITY}. In contrast, according to the coercion approach, which is proposed by de Swart (1998), among others, a shifted interpretation is ‘coerced’ for propositions in order to satisfy the aspectual constraints of aspectual operators (e.g. the progressive operator).³⁹ These competing analyses are considered in this section,

³⁸ Recall that a single marked element induces a feature resolution in the present approach (see footnote 21).

³⁹ In de Swart (1998: 349), coercion, especially aspectual coercion, is defined as

an implicit, contextually governed process of reinterpretation which comes into play whenever there is a conflict between the aspectual nature of the eventuality description and the input condition of some aspectual operator.

According to de Swart (1998: 362–3), (i) is the grammatical structure of a sentence like *Susan is liking this play a great deal*.

(i) [PRES [PROG [C_{sd} [Susan like this play]]]]

followed by a discussion of the advantages of the present analysis.

First, the lexical ambiguity approach has the problem of overgenerating ungrammatical examples, such as (25) and (30).

(30) *John is resembling his father. (Zucchi 1998: 351)

In order to deal with examples like those in (24), the lexical ambiguity approach claims that *resemble* is lexically ambiguous between a stative reading and a process reading. If there are two homophonous verbs – one state, the other activity – why is (31b) not allowed in Standard English (cf. Zucchi 1998: 352)?

- (31) a. *John is resembling_{STATE} his father.
 b. *John is resembling_{ACTIVITY} his father.

Contrary to the lexical ambiguity approach, both the underspecification approach and the coercion approach can explain why some verbs allow aspectual type-shift only under certain circumstances. In the present account, the factor that triggers the resolution of an unspecified feature value varies case by case (cf. (23)). For example, in (24b), the triggering element is the adverbial *more and more*, which is lacking in (30). As there is no trigger in (30), the possibility that the verb *resemble* could have the [-static] feature at the sentential level is excluded from the outset (see also the discussion in section 4.2 regarding example (25)).⁴⁰ Parallel remarks apply to the coercion approach. De Swart (1998: 361) avoids overgeneration such as (30) by introducing a coercion operator ‘only when there is a trigger for it’. Unlike in the present study, de Swart (1998) does not explicitly mention what the triggers are, but they include certain adverbials (cf. Michaelis 2004: 23).

The preceding discussion suggests an empirical advantage of the

In (i) C_{sd} is a coercion operator that maps a state onto a dynamic eventuality.

⁴⁰ Under the underspecification approach, in (25) there is no trigger for the override mechanism (i.e. the agentivity element of the verb *be*). Therefore, examples such as (25) cannot be generated. By contrast, in the lexical ambiguity approach, there are two homophonous verbs – one state, the other activity –, as in (i).

(i) a. Dana is_{STATE} tall/fat/a doctor.
 b. *Dana is being_{ACTIVITY} tall/fat/a doctor.

underspecification approach over the lexical ambiguity approach. Perhaps a more serious problem with the lexical ambiguity approach is that the postulation of homophonous verbal lexemes with distinct aspectual types is profligate. By contrast, the most compelling advantage of the approach proposed in this paper is that the idea of underspecification is defended on independent grounds. Since a theory of underspecification has been put forward by some phonologists, such as Archangeli (1988),⁴¹ the recognition of underspecified entities in linguistic analysis has gained support not only from the area of phonology but also from various subdisciplines of linguistics. In other words, ‘simplifying representations’ by ‘removing extraneous material’ (Archangeli 1994: 4833) is conceptually well grounded.

As for the coercion approach, it is similar to the underspecification approach in that the mechanisms employed in both approaches are morphosyntactically invisible, context-driven and implemented on an as-needed basis. Therefore, it is not easy to determine whether the underspecification approach promises better empirical coverage than the coercion approach.

Recently, there has been a growing trend among researchers to attempt to converge diverse academic fields or integrate different subdisciplines within a field. The present study reflects this attempt by making use of concepts such as ‘feature underspecification’ and ‘distinctive feature’ that have their origins in phonology to provide an analysis of the verb lexicon, a topic of interest in the syntax-semantics interface.⁴² In conclusion, there are sufficient grounds for claiming that the underspecification analysis advocated in this paper is conceptually attractive. The major empirical contribution of the underspecification approach is that it has wider

⁴¹ See the references cited in Kim (1991) and Steriade (1995).

⁴² Strictly speaking, the underspecification analysis is not an entirely novel idea, since it is noted in passing by several authors, as shown in (i).

- (i) a. [T]he denotation of specific verbs is either underspecified or coercible into different event types. (Adams 1999: 91)
- b. If we had not wanted to make coercion operators explicit in a theory like DRT [Discourse Representation Theory], we could have developed an underspecification approach, instead of a mapping analysis. (de Swart 1998: 364)

De Swart (1998: 364) further mentions ‘underspecification in the verbal domain’, but only argues against it. In this latter respect, the attempt to advocate and elaborate the underspecification approach is considered the main novelty of the present study. Indeed, to the best of my knowledge, no previous study has fully elucidated this idea, as in this study.

empirical coverage than the compositional approach and is free from the overgeneration problem inherent in the lexical ambiguity approach.

6. Conclusion

Since Vendler (1957), it has largely been assumed that state and achievement verbs are incompatible with the progressive aspect. Yet, according to Dowty (1972, 1979), Mourelatos (1978), Bach (1981) and Biber *et al.* (1999), among others, there are aspectual progressives that are resistant to this line of analysis. The main contribution of the present study is that it leverages the complementary strengths of both perspectives. That is, by appealing to the notion of underspecification, this study proposes an account of the distribution of aspectual progressives in English that is flexible enough to handle the full range of the relevant phenomena. This is a desirable result. Methodologically, the idea that verbs are best treated as underspecified with respect to some crucial aspects of meaning that are essential for determining their aspectual types is conceptually well founded. Empirically, the underspecification approach is superior to the lexical ambiguity approach because the phenomenon of so-called aspectual type-shift can be explained in a more advantageous way in the present account. As a final remark, consideration of countability in nouns suggests that resolvable underspecification is a pervasive lexical phenomenon, and not confined to aspect.

Appendix

Table A1a. Distribution of progressives with seven state verbs in ICE-GB, ICE-IND and ICE-IRL

Construction	ICE-GB		ICE-IND		ICE-IRL	
	Active	Passive	Active	Passive	Active	Passive
Present	7	1	10	—	9	—
Past	3	—	5	—	2	—
Present perfect	—	—	—	—	—	—
Past perfect	—	—	2	—	—	—
Modal	2	—	11	—	1	—
Modal perfect	—	—	1	—	—	—
<i>Will/shall</i>	—	—	4	—	1	—
<i>Will/shall</i> perfect	—	—	—	—	—	—
<i>To</i> -infinitive	—	—	—	—	—	—
Perfect <i>to</i> -infinitive	—	—	—	—	—	—
Total	12	1	33	0	13	0

Table A1b. Distribution of progressives with seven achievement verbs in ICE-GB, ICE-IND and ICE-IRL

Construction	ICE-GB		ICE-IND		ICE-IRL	
	Active	Passive	Active	Passive	Active	Passive
Present	4	—	3	1	2	1
Past	1	1	2	—	1	—
Present perfect	1	—	—	—	—	—
Past perfect	—	—	—	—	—	—
Modal	—	—	—	—	—	—
Modal perfect	—	—	—	—	—	—
<i>Will/shall</i>	—	—	—	—	1	—
<i>Will/shall</i> perfect	—	—	—	—	—	—
<i>To</i> -infinitive	—	—	—	—	—	—
Perfect <i>to</i> -infinitive	—	—	—	—	—	—
Total	6	1	5	1	4	1

Table A1c. Distribution of '*be + wanting*' in ICE-GB, ICE-IND and ICE-IRL

Construction	ICE-GB		ICE-IND		ICE-IRL	
	Active	Passive	Active	Passive	Active	Passive
Present	6	—	3	—	4	—
Past	2	—	—	—	—	—
Present perfect	—	—	—	—	—	—
Past perfect	—	—	—	—	—	—
Modal	2	—	—	—	1	—
Modal perfect	—	—	1	—	—	—
<i>Will/shall</i>	—	—	—	—	1	—
<i>Will/shall</i> perfect	—	—	—	—	—	—
<i>To</i> -infinitive	—	—	—	—	—	—
Perfect <i>to</i> -infinitive	—	—	—	—	—	—
Total	10	0	4	0	6	0

Table A1d. Distribution of '*be + knowing*' in ICE-GB, ICE-IND and ICE-IRL

Construction	ICE-GB		ICE-IND		ICE-IRL	
	Active	Passive	Active	Passive	Active	Passive
Present	—	—	3	—	—	—
Past	—	—	4	—	1	—
Present perfect	—	—	—	—	—	—
Past perfect	—	—	2	—	—	—
Modal	—	—	11	—	—	—
Modal perfect	—	—	—	—	—	—
<i>Will/shall</i>	—	—	4	—	—	—
<i>Will/shall</i> perfect	—	—	—	—	—	—
<i>To</i> -infinitive	—	—	—	—	—	—
Perfect <i>to</i> -infinitive	—	—	—	—	—	—
Total	0	0	24	0	1	0

Table A2a. Vendler' s (1957) verb classes (Shirai 2002: 456)

Aktionsart	State	Activity	Accomplishment	Achievement
Features				
[dynamic]	-	+	+	+
[telic]	-	-	+	+
[punctual]	-	-	-	+

Table A2b. Vendler' s (1957) verb classes (Rothstein 2004: 12)

Aktionsart Features	State	Activity	Accomplishment	Achievement
[stages]	-	+	+	-
[telic]	-	-	+	+

Table A2c. Vendler' s (1957) verb classes (Brinton 1988: 29)

Aktionsart Features	State	Activity	Accomplishment	Achievement
[stative]	+	-	-	-
[durative]	+	+	+	-
[telic]	-	-	+	NA
[voluntary]	-	±	±	±

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