

**After Verkuyl’s Discovery Aspect is No Longer a Mystery,  
but Aspectology Needs a Reform Review Article:  
Henk Verkuyl, *The Compositional Nature of Tense, Mood  
and Aspect* (Cambridge Studies in Linguistics 167).  
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*This is a review article on a new monograph by Henk Verkuyl, the finder of compositional aspect (CA), which crowns his research for six decades already. The paper summarizes Verkuyl’s contribution in describing the mechanism of aspect in CA languages by establishing two semantico-syntactic schemata, a perfective and an imperfective one. Defects, flaws and omissions in his model are also identified. Verkuyl’s discovery is widely recognized but his theory is misconceptualized in its very core by a large part of the aspectological community. The reasons for the massive misconceptualization are analyzed against the author’s own model, claimed to be capable of providing the most adequate explanation of CA vis-à-vis verbal aspect (VA) and of doing ultimate justice to Verkuyl’s “oeuvre”.*

**Keywords:** *compositional aspect, verbal aspect, article-aspect interplay, boundedness/non-boundedness, perfectivity/imperfectivity, temporality of situation participants*

### **Discovery of CA**

In a 1971 Utrecht dissertation, the finding of a significant language phenomenon was reported (Verkuyl 1972), later called CA by other researchers. Half a century on, a new book with a similar title by the author (Verkuyl 2022) has hit the shelves of academic libraries and bookshops to mark the five decades since the discovery. Its main idea is that aspect, tense and modality can be characterized together in a binary approach, not separately from one another (Verkuyl 2022, p. 256). But this review deals with Verkuyl’s work on aspect only, not on tense or modality – because aspect is the heart of his undertaking while the explorations on tense and modality are extensions of his main efforts rather than independent endeavors.

Certain major issues in Verkuyl’s model that frequently remain misunderstood or buried under details in aspectological studies are outlined; weaknesses, flaws and omissions are also identified. The review is based on the conceptualization of aspect as a language phenomenon, not through the prism of philosophy or formal semantics, although the author’s approach, alongside linguistics, lies predominantly within the latter, partly within the former. Formal semantics and philosophy have a place in aspectological analyses, but they occasionally confront standard linguistic

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approaches and lead into dead-ends. The review also focuses on the author's efforts to draw a convincing parallel between CA and VA, the latter represented in Slavic and some other languages. Finally, as this text is for a specialized readership, presupposed in it is common knowledge on VA/CA, Vendler's (1957) classification,<sup>1</sup> determiners' impact in CA construal, etc.

In his speech at the workshop in October 2021 in Amsterdam to mark the 50<sup>th</sup> anniversary of the defense of his dissertation, Verkuyl emphasized that in the 1960s he had been troubled by the fact that aspect, exemplified exclusively by Slavic VA then, was regarded as a mystery, practically by all linguists. He was convinced that perfectivity-imperfectivity ought to be possible to be realized in "aspectless languages" like English, including his mother tongue Dutch.<sup>2</sup> In those times a Slavist exclaimed: "Russian aspects are awe-inspiring and mystical categories" to be treated by the initiated, the native speaker (Issatschenko 1974, p. 141). Others not only rejected the existence in Germanic languages of Slavic-like aspect but even dispensed warnings that seeking manifestations of aspect outside VA languages is a waste of time (Zandvoort 1962, Dušková 1983). The second of these publications appeared a decade after the discovery of CA – showing that its recognition in the linguistic community was by far not easy or fast at all. Actually, for many researchers it has remained a hard nut to crack even today, despite the otherwise vast recognition of the discovery. Note that three decades after his dissertation, Verkuyl (1999, p. vii) himself saw the recognition of aspect as a compositional phenomenon as only "gaining ground", a statement he made six years after introducing a more sophisticated CA model (Verkuyl 1993) – revealing uncertainty about his own achievement. Earlier, as a young man in the 1970s, he was patted on the shoulders by authorities of that time, specialists in aspect, for his correct observations on Dutch and English, but was also admonished that on Slavic data "things are more complex". The well-wishers had not the slightest idea they were *not* on the right track, *he* was. And even today, with his model widely recognized as valid for the Germanic languages, hosts of researchers dramatically fail to discern its value for understanding aspect universally (see below).

In Verkuyl (1999, p. vii) another revelation was made, indicative both of the author's past qualms and of the state of the art in aspectology today, when many continue to be unaware of the domain CA operates in. Verkuyl admitted he *needed ten years* prior to his dissertation to realize that "it is imperative to distinguish sharply" between aspectuality at the VP- and the S(entence)-level (ibid.). The opposite was a mistake he had to overcome to grasp the essence of CA and where it operates: the sentence, not some parts thereof. Sadly, aspectology today continues to be misled by publications "discovering" CA in the VP (see Kabakčiev 2018, 2019, 2021a, Dimitrova and Kabakčiev 2021). An alarm concerning the massive misconceptualization was recently raised: "the strong focus on internal arguments has overshadowed the role of external arguments in the calculation of aspect" (Bulatović 2020, p. 391). To sum up, Verkuyl realized that CA is an S-level

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<sup>1</sup>And his colleagues' Garey, Kenny, Ryle.

<sup>2</sup>There are no aspectless languages. There are theories whose proponents are not aware that *all* languages have systematic devices for perfectivity/imperfectivity.

phenomenon in the 1960s and it is really strange today to observe quests for a cause he relinquished five decades ago.

### Verkuyl's Conception of Aspect in Terms of Two Schemata

While most publications in aspectology focus on minor issues about the contribution of VP-level information to CA, Verkuyl's understanding of aspect in Dutch and English is S-based in terms of two semantico-syntactic schemata, perfective-imperfective, initially called terminative-durative (labels he still uses – Verkuyl 2022, pp. 39, 135–138)<sup>3</sup>. The perfective schema contains only plus-values, +SQA in NPs and +ADD TO in verbs, where +SQA is “specified quantity of A”, and +ADD TO is loosely defined as movement to bring about some change (Verkuyl 1993, pp. 17–18) or an expression of dynamic progress of some sort (Verkuyl 2022, p. 123). The imperfective schema contains at least one minus-value (-SQA/-ADD TO), see below.

In the notation assumed here (and elsewhere – Kabakčiev 2000, 2019), the term +SQA is replaced by “bounded”; -SQA by “non-bounded” (“bounded”/“unbounded” also used by Verkuyl 2022, pp. 65–72). The term +ADD TO is replaced here by “telic”, -ADD TO by “atelic”. By telic, the value “directed to a telos” is meant, not that a telos is achieved, atelic means “not directed to a telos”. Thus, verbs like *bring*, *enter*, *fall*, as lexical entities, whatever the sentence they are used in, and whatever the situation participants, are telic. There is action, activity, movement aimed at a telos – achieved or not depending on the sentence. Conversely, *carry*, *contain*, *exist*, *run* are atelic verbs. There is no state, action, activity, nor movement directed to a telos (*John carried the bag*, *John ran in the morning*), unless situation-participant NPs or adverbials are added explicating a telos: *John carried the bag to the station*; *John ran a mile*, in both the telos is an achieved one. Similarly, *love* and *hate* are state verbs, inherently atelic, not aimed at a telos, and normally trigger imperfectivity: *John loved/hated Mary*. But they can sometimes be coerced into perfectivity, e.g., by adverbials: *John suddenly loved/hated Mary*.

Verkuyl's conviction has always been that CA is aspect *per se* and universal “as it is”, i.e., as he envisions it, even in VA languages. Phrased otherwise, CA is the *real thing* and Slavic VA is something that keeps on getting in the way – until eventually it is correctly understood. Actually, CA exists in VA languages – peripherally (Kabakčiev 1984, 2021b, Dimitrova 2021, p. 202), but Verkuyl's schemata *cannot be mechanistically transferred to VA* (Kabakčiev 2019, p. 212ff) – because VA is a phenomenon different from CA, yet the two are closely related.

In any case, the *quintessence* of Verkuyl's theory, maintained *in all of his publications*, including his three major monographs (Verkuyl 1972, 1993, 2022), is that sequences/sentences like (1a) below with bounded (+SQA) situation-participant NPs and a preterit verb form (unmarked for aspect), explicate perfectivity, whereas sequences/ sentences like (1b–d) explicate imperfectivity. To

<sup>3</sup>“Non-durative” means terminative (Verkuyl 1972, p. 41).

be able to make the perfective-imperfective transition, the latter obligatorily contain at least one so-called leak, also labeled a minus-value: a non-bounded NP (-SQA) or an atelic (-ADD TO) verb,<sup>4</sup> Verkuyl (2022, pp. 123–127).<sup>5</sup> Counterpoised to the imperfective one, the perfective schema demonstrates Verkuyl's so-called plus-principle, all components in a perfective sentence feature plus-values: +SQA situation-participant NPs and +ADD TO verbs (Verkuyl 2022, pp. 122–128), cf. (1):<sup>6</sup>

- (1) a. A/The tourist visited a/the castle.
- b. A/The tourist visited castles<sub>LEAK</sub>.
- c. Tourists<sub>LEAK</sub> visited a/the castle.
- d. A/The tourist hated<sub>LEAK</sub> a/the castle.

The rules of the schemata work perfectly outside contexts, unless some pragmatic (not semantic) circumstance interferes with the prototypical interpretation. Thus (2a), with a bounded subject (through an article) and a non-bounded object (through a zero article) matches the imperfective schema and explicates imperfectivity. But (2b), again with a bounded subject and a non-bounded object, fails to conform to the imperfective schema. It signals perfectivity, due to “knowledge of the world”, a pragmatic factor (Kabakčiev 2000, pp. 309–326):

- (2) a. The neighbor sold beer.
- b. The neighbor bought beer.

This is because we simply know that *selling beer* is a job – a Vendlerian activity/state, an imperfective situation, whereas *buying beer* is typically a one-off act, a Vendlerian accomplishment, a perfective situation. Phrased otherwise, the pragmatic factor “knowledge of the world” is capable of overriding the rules of Verkuyl's schemata. Although Verkuyl (2022) frequently considers pragmatic interferences, he never formulated a regularity such that the rules of the schemata can be systematically overridden. This boils down to the need to distinguish between default and non-default aspectual readings of sentences.

### Verkuyl's Schemata in a Cross-Language Perspective

When the major tenets of Verkuyl's theory about V- and NP-features in perfective and imperfective sentences are analyzed in cross-language terms, it becomes clear that

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<sup>4</sup>I call the leaks Verkuylian in honor of their finder (Kabakčiev 2019, p. 204), but also because the leak phenomenon *is not some banal observation*. It is part of the complex conceptualization of CA – yet in need of modification should it be juxtaposed to VA.

<sup>5</sup>There is one more leak, negation, problematic (see below).

<sup>6</sup>Sentences (1) are constructed by me to facilitate the discussion; Verkuyl does not use same-pattern examples like these.

*the key difference between CA and VA is in the effectuation of perfectivity; perfective verbs are the hallmark of VA.*

Languages with VA – Proto-Germanic, Latin, Old/Modern Greek, Old/Modern Slavic, have perfective verbs as lexical entries. Languages without perfective verbs feature CA: today’s Germanic and Romance languages, Finnish, etc.; they *depend on CA to effectuate perfectivity*. As for imperfectivity, it is frequently effectuated in CA languages even grammatically: through the imperfect and/or the progressive (Spanish, English), special constructions (English *would/used to+inf*, German *am NP<sub>Dat</sub> sein*), etc.

The linguistic world owes to Verkuyl (1972) the understanding of the way perfectivity is effectuated in CA languages and of the function performed by the article/zero-article distinction for explicating aspect. But the description of this superimportant function in his publications appears only in sporadic and veiled statements, like “SPECIFIED is provisionally located in the Determiner” (Verkuyl 1972, p. 59). Today, five decades later, two papers endorsing Verkuyl’s theory have made an impact by viewing CA and the article-aspect interplay (the latter being part of the former) as so hugely important that the author insists they must be incorporated into English grammars (Bulatović 2020, 2022). Fully convincing as the proposal is, it conveys another requirement: grammars of other Germanic languages, including Verkuyl’s mother tongue Dutch, also need to incorporate CA and the article-aspect interplay – however difficult and time-consuming it may be to have to reform conservative material such as grammar.

Verkuyl’s (1972, 1993, 2022) work and other researchers’ developments of it (Bulatović 2020, 2022, Dimitrova 2021, Kabakčiev 2000, 2019, 2021b, 2022) show that the article (as a unified *a+the* entity vis-à-vis the zero article) plays *the major role* in effectuating perfectivity. Compare (1), where the article (definite/indefinite) explicates boundedness in NP-referents, while the zero article explicates non-boundedness. In sentences like (1a), belonging to Verkuyl’s perfective schema, the two NP-referents’ boundedness is mapped onto the V-referent, forcing it into perfectivity (Kabakčiev 1984, 2000, 2021b). In sentences like (1b–c), containing a subject- or object-leak and belonging to the imperfective schema, imperfectivity is, however, mapped onto the verb in an intricate way: (i) the non-boundedness of the relevant NP-referent, consisting in non-bounded iterativity, is mapped onto the V-referent coercing it into signaling imperfectivity (non-bounded iterativity); (ii) this non-bounded iterativity of the V-referent is then mapped onto the other NP-referent, eliminating its potential boundedness induced by the article – definite or indefinite (Kabakčiev 2019). But note that this mechanism is valid for situation-participant NPs; a sentence may contain NPs whose referents are *not* situation participants.<sup>7</sup> In sentences like (1d), containing a leak in the verb (atelicity), the explication of imperfectivity is again specific, and there is again V-NP/NP-V mapping. This time the lexical stativity of the verb overrides the tendency for NPs

<sup>7</sup>The term “situation participant” was launched in Kabakčiev (1984) instead of Verkuyl’s “verb arguments”, for being better suited to aspectological research. But not all NPs are situation participants. While in (1a–d) they are, *the hill* in *The tourist visited the castle on the hill* is not a situation participant.

with determiners, quantifiers, etc. to signal temporal boundedness – the temporal non-boundedness of the V-referent is mapped onto the two NP-referents, suppressing, canceling their potential boundedness.

Some further notes about the zero article are necessary. This term is standardly taken to mean – somewhat illogically – that the relevant NP contains no other quantifier. In English many nominal modifiers are quantifiers (*many, my, all, some/any, this/these*), markers of what Verkuyl (1972) calls “specified quantity”. But the marker of “non-specified quantity”, i.e., non-boundedness, is *only one*, the zero article. An NP with an article is, hence, quantified by default and its referent bounded. Conversely, a zero-article NP is by default unquantified/de-quantified and its referent is non-bounded. But boundedness/non-boundedness are values that depend on other factors too.

It is now time to deal with an important issue unexplored by Verkuyl. It has to do with the way (non-)boundedness as V/NP-values relate to aspect effectuation. Compare (3) – extracted from (1):

- (3) a. The tourist visited the castle.  
 b. The tourist visited castles<sub>LEAK</sub>.  
 c. Tourists<sub>LEAK</sub> visited the castle.  
 d. The tourist hated<sub>LEAK</sub> the castle.

Verkuyl's remarkable contribution is that he managed to explain CA through the two schemata: if each NP is bounded (+SQA) and the verb telic (+ADD TO), the sentence is perfective (3a); if one NP or more than one is -SQA and/or there is -ADD TO in the verb, the sentence is imperfective (3b–c–d). Verkuyl (1993, p. 73) terms this “feature algebra”. But the process can also be labeled NP-V/V-NP mapping, as argued above (and in Kabakčiev 1984, 2000, 2019). In (3a) the boundedness of *the tourist* and *the castle* are mapped onto the verb to trigger perfectivity, complemented by the V-feature telic. Similarly, non-boundedness in the relevant NP in (3b–c) is mapped onto the verb to trigger imperfectivity. In (3d) there is V-NP interplay/mapping again: the two NPs' boundedness is blocked by the atelic verb.

A problem here is that Verkuyl does not explain the status of NPs like *the tourist* in (3b) and *the castle* in (3c) as regards the following. These NPs continue to carry an article as in (3a). However, as the relevant sentence (3b–c) is no longer perfective, qualifying these NPs as bounded turns troublesome. Are they bounded because they continue to carry an article? Or are they non-bounded because the sentence is now imperfective? If *the tourist* and *the castle* in (3b–c) are to be considered non-bounded because they are associated with V-referent imperfectivity, what does the article, an exponent of boundedness, do here then? A long time ago (Kabakčiev 2000, pp. 123–151), these very serious questions were given definitive answers, providing additions to Verkuyl's schemata and proving indispensable for their correct interpretation by incorporating the idea of the temporality of NP-referents. Boundedness and non-boundedness are *temporal* features, not spatial. Unfortunately, the temporality of situation-participant NPs systematically escapes

the attention of researchers; Vouchnev (2007, pp. 86–87) seems to be the first, among few, to have subscribed to the idea of temporality of NP-referents.

Finally, note that if in languages like English the article plays a key role for the effectuation of perfectivity, there are languages that are structurally different, with no articles, yet falling again within the CA paradigm. Finnish is such a language, featuring “nominal aspect” (Kabakčiev 2019, p. 218). It has no VA and no articles – but has markers of boundedness on nouns. Boundedness materializes in Verkuyl’s perfective schema through the nominative/accusative case. And while in languages like English non-boundedness is realized by the zero article, in Finnish and similar languages this is effectuated through the partitive case, within Verkuyl’s imperfective schema.

### On the Possible Universality of Verkuyl’s Schemata

#### *Are the Schemata Valid for VA Languages?*

In essence, the answer to this question is negative. However, an important theoretical issue now arises which, sadly, systematically remains either outside the focus of interest of researchers or beyond their capacity. Verkuyl (2022), interestingly, uses data from several VA languages – Greek, Russian, Bulgarian, Georgian – to show the explanatory power of his theory. But his attempt in this domain is generally unsuccessful, due to his belief that his schemata ought to work in VA languages precisely as they do in English.

First, Verkuyl analyzes Russian (4), arguing that in the perfective (4a) *pis’mo* “corresponds with the English NP *the letter* in contextually identifying a specific letter”. As for sentence (4b), imperfective, he finds that here *pis’mo* is “stripped off its referential force [...] Olga is ‘letter-writing’, so to say, although Olga may be working on a specific letter identified earlier in the discourse” (Verkuyl 2022, pp. 226–227):

- (4) a. Ol’ga napisala<sub>pfv</sub> pis’mo.  
 Olga wrote letter  
 ‘Olga wrote a/the letter’  
 b. Ol’ga pisala<sub>Impfv</sub> pis’mo.  
 Olga wrote letter  
 ‘Olga wrote habitually/was writing a/the letter’

Verkuyl’s first observation is wrong: *pis’mo* matches perfectly *the letter* and *a letter*, not only *the letter*. But in any case *pis’mo* stands for a specific letter, it does not cover a generic or generic-like meaning. Where Verkuyl’s observation fails is to establish what exactly *pis’mo* does *not* correspond to, something extremely important despite its negative content. In (4a) *pis’mo* does not correspond to the habitual (non-progressive) reading of (4b) – in which *pis’mo* has a non-specific meaning (generic or generic-like). Furthermore, in the habitual reading of (4b) *pis’mo* stands not so much for a physical/material entity as for a *kinetic object*, re-

occurring, a temporally non-bounded concatenation of letters, a series of letters produced one after another with no known starting- and end-points (Kabakčiev 1984, 2000, 2019, 2021b) – *pis'mo* is here a plural object despite its grammatical singularity. Or, phrased otherwise, in (4a) *pis'mo* stands for a *temporal* entity, a one-off instantiation in time of a letter, while in (4b) it is a temporal entity of a completely different kind – a kinetic pluralized object, indefinitely recurring. In Vounchev's (2007, pp. 86–87) aspectual analysis of the VP domain (not considering subject-NP referents) temporal values of *letter* are discussed on Bulgarian and Greek data and his conclusions are similar: the temporal values of *letter* (Bulgarian *pismo*, Greek *grámma*) differ, depending on the aspect of the verb.

Second, Verkuyl's observations overlook *the reasons why* there is such a dramatic difference between the interpretations of *letter* in the two sentences. As already established, it is due to the aspectual difference (*napisala*<sub>PFV</sub>/*pisala*<sub>IMPFV</sub>), and there is a crystal-clear V-NP interplay. The imperfective *pisala* allows readings of *pis'mo* such as: (i) definite; (ii) indefinite; (iii) specific; (iv) non-specific; (v) generic-like; (vi) a single temporal instantiation of *pis'mo* (progressive-like); (vii) recurrent non-bounded kinetic images of *pis'mo* (no definite beginning and end in time). Conversely, and significantly, the perfective *napisala* completely *rules out* non-specific, generic and generic-like readings, as well as recurrent (non-bounded) kinetic images. Instead, a single temporal instantiation of *pis'mo* arises, a letter in the form of a single kinetic entity in the mind of speaker/hearer, with a definite beginning and a definite end on the time axis. The boundedness is transferred onto the referent of *pis'mo* (coerced onto it) from the referent of the perfective verb.

It is common knowledge that V-perfectivity is incompatible with non-bounded iterativity associated with adverbials like *often* (Kabakčiev 2021b, pp. 38–39). Recurrent non-bounded kinetic images are disallowed. Indeed, perfective verbs sometimes allow iterativity – but only if the iterativity is bounded, effectuated a definite number of times (Kabakčiev 2021b, pp. 38–39). The regularity is due to the circumstance that the denotation of single perfective events is important, hence guarded by language structure (Kabakčiev 2021b, p. 39). And in this case the regularity shows that there is again an interplay – not difficult to perceive – between temporal adverbials and VA, on the one hand. And, on the other, there is another interplay, this one difficult to see, between VA and the possible configurations on the time axis of situation-participant NP-referents.

#### *Can Verkuyl's Schemata Somehow Be Transferred to VA Languages?*

Now it will be shown – on Greek, Russian, Bulgarian and Georgian data – that actually Verkuyl's schemata *can* be transposed to VA. But it is not in the way Verkuyl – along with other researchers – envisions it.

Russian, Bulgarian and Greek are Indo-European languages, the first two Slavic, the third belonging to the Hellenic group; Georgian has no known genealogical links to other languages. Let us consider CA in English – against aspect realization in VA languages, by comparing (3) to their translation correspondences (5)–(8) in Russian, Georgian, Bulgarian, Greek, respectively:



- (5) a. Tunist posetil<sub>PfvPast</sub> zamok.  
 Tunist visited castle
- b. Tunist poseščal<sub>ImpfvPast</sub> zamki.  
 Tunist visited castles
- c. Turisty poseščali<sub>ImpfvPast</sub> zamok.  
 Tourists visited castle
- d. Tunist nenavidel<sub>ImpfvPast</sub> zamok.  
 Tourist hated castle
- (6) a. t'urist'ma<sub>Serg</sub> moinakhula<sub>AorPfv</sub> tsikhesimagre<sub>Onom</sub>.<sup>8</sup>  
 Tunist visited castle
- b. t'urist'i<sub>SNom</sub> st'umrobd<sub>ImpImpfvSg</sub> tsikhesimagre<sub>SONomPlur</sub>.  
 Tourists visited castles
- c. t'urist'ebi<sub>SNomPl</sub> st'umrobdnen<sub>ImpImpfvPl</sub> tsikhesimagre<sub>SONomSg</sub>.  
 Tourists visited castle
- d. t'urist's<sub>SdatSg</sub> sdzulda<sub>ImpImpfvSg</sub> tsikhe-simagre<sub>ONomSg</sub>.  
 Tourist hated castle
- (7) a. Tunistät poseti<sub>PfvAor</sub> zamäka.  
 Tourist-the visited castle-the
- b. Tunistät poseštavaše<sub>ImpfvImp</sub> zamätsi.  
 Tourist-the visited castles
- c. Turisti poseštavaha<sub>ImpfvImp</sub> zamäka.  
 Tourists visited castle-the
- d. Tunistät mrazeše<sub>ImpfvImp</sub> zamäka.  
 Tourist-the hated castle-the
- (8) a. Otouristas episkéftike<sub>Aor</sub> to kástro.  
 The tourist visited the castle
- b. O touristas episkeptótan<sub>Imp</sub> kástra.  
 The tourists visited castles
- c. Touristes episképtontan<sub>Imp</sub> to kástro.  
 Tourists visited the castle
- d. O touristas misoúse<sub>Imp</sub> to kástro.  
 The tourist hated the castle

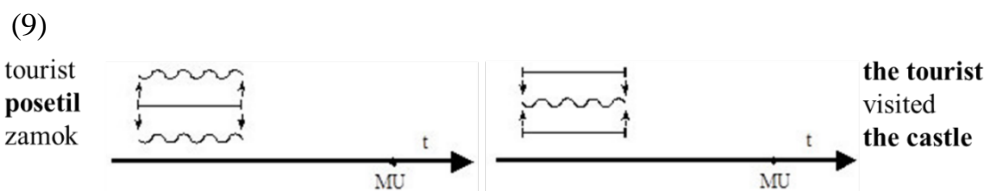
These examples demonstrate how aspect is realized across languages. The first sentence in each block is perfective, the following three imperfective. In English perfectivity-imperfectivity is compositionally realized by NP-V/V-NP mapping. As already mentioned, sentences (3a–c) are *specially constructed* to demonstrate the impact of the two NPs *simultaneously*. The de-quantification of *either* the subject or the object through a zero article (replacing *a/the*) imperfectivizes the previously perfective sentence. Verkuyl explains this impact for the subject and the object but does not use identical initial sentences – which veils the regularities. As for VA languages, (5)–(8), note that there is no difference in aspect effectuation in the four types of sentences: aspect is realized directly by the verb and at first sight the situation-participant NPs appear to have nothing to do

<sup>8</sup> Georgian does not use capital letters.

with this. But, as already established, NP-referents are affected by the aspect of the verb. When it is perfective, they explicate certain temporal values; when it is imperfective they explicate other values. Note that here the definite article in Greek and Bulgarian does not impact aspect effectuation,<sup>9</sup> nor does its absence in Russian and Georgian.

Despite the six decades of prolific work, Verkuyl sidestepped language typology and the prevalence across languages of markers of boundedness in verbs and nouns. In my model of aspect (Kabakčiev 1984, 2000, 2019, 2021b), based on Verkuyl's (1972, 1993), languages are classified into three types. In European ones such as Germanic, Romance, Finnish, the markers of boundedness are on nouns. These languages entirely rely on CA for the effectuation of perfectivity – the more special, marked member of the perfective-imperfective contrast.<sup>10</sup> Prototypical and highly prevalent markers of boundedness in Germanic and Romance languages are the articles, represented by the regular pattern of *a/the* – vis-à-vis the zero article explicating non-boundedness. In Slavic and Greek (also in Georgian) the markers of boundedness are on verbs, with perfectivity-imperfectivity grammatically encoded. There are, however, languages that are hybrid, with markers of boundedness on *both* verbs and nouns, e.g., Bulgarian and Greek – VA languages with a definite article and no indefinite (Kabakčiev 1984, 2000).

In my understanding of aspect in both synchronic and diachronic terms (Kabakčiev 2021b), CA and VA are different phenomena, yet similar and constituting mirror images of each other. Here is a diagrammatic representation of perfectivity – cf. English (3a), Russian (5a):



The elements featuring boundedness (perfective verb, +SQA NPs) are in bold. In Russian, the boundedness/perfectivity of the V-referent is mapped onto the two NP referents, see the left part of (9). In English, see the right part, the boundedness of NP referents is mapped onto the V-referent, creating two mirror images (Kabakčiev 2000, pp. 158–161).

This cross-language regularity would not have been established without Verkuyl's discovery. Note that the discovery of CA invalidated Jakobson's (1957) previously acclaimed contention that VA is a category *per se* that has nothing to do with participants in situations. Exactly the opposite: VA maps its temporal boundedness onto situation-participant NP referents, and the perfectivity-

<sup>9</sup>But it can in certain other conditions (Dimitrova and Kabakčiev 2021).

<sup>10</sup>My aspect model has been endorsed by Lindstedt (1986), Leiss (2000), Abraham and Leiss (2012), Bulatović (2013), Dimitrova (2021) and Shabashvili (in Shabashvili and Kabakčiev 2021); my conception of the NP-V-NP interplay of temporal features was first subscribed to by Vounchev (2007, pp. 86–87).

imperfectivity contrast in CA languages is mainly effectuated precisely through situation-participant NPs. They either map their temporal boundedness onto the referent of the aspectually ambivalent verb, coercing it from aspectual ambivalence into boundedness and perfectivity, or, in cases of imperfectivity (3b–c), there occurs complex NP-V/V-NP mapping, whereby the sentence is finally assigned imperfectivity. In cases such as (3d) there is again V-NP mapping: the verb's stativity cancels the potential NP boundedness.

Table 1 shows how Verkuyl's schemata work in CA languages. Table 2 shows how aspect is realized in VA languages:

**Table 1.** *English, a CA Language*

<b>The tourist</b> [bounded]	<i>visited</i> [telic]	<b>the castle</b> [bounded]	[perfective meaning]
<i>The tourist</i> [bounded]	<i>visited</i> [telic]	<b>castles</b> <sub>LEAK</sub> [non-bounded]	[imperfective meaning]
<b>Tourists</b> <sub>LEAK</sub> [non-bounded]	<i>visited</i> [telic]	<i>the castle</i> [bounded]	[imperfective meaning]
<i>The tourist</i> [bounded]	<b>hated</b> <sub>LEAK</sub> [atelic]	<i>the castle</i> [bounded]	[imperfective meaning]

**Table 2.** *Russian, a VA Language*

<i>Turist</i> [unmarked]	<b>posetil</b> bounded	<i>zamok</i> [unmarked]	[perfective grammatically]
<i>Turist</i> [unmarked]	<b>poseščal</b> non-bounded	<i>zamki</i> [unmarked]	[imperfective grammatically]
<i>Turisty</i> [unmarked]	<b>poseščali</b> non-bounded	<i>zamok</i> [unmarked]	[imperfective grammatically]
<i>Turist</i> [unmarked]	<b>nenavidel</b> non-bounded	<i>zamok</i> [unmarked]	[imperfective grammatically]

In both tables, the sentence components governing the aspectual reading are in bold. As can be seen in Table 1 for English, the effectuation of the final aspectual interpretation is *extremely complex*. Tribute must be paid to Verkuyl for his insight and ingenuity in building the two aspectual schemata and for ultimately busting the myth that Slavic aspect has no systematic correspondence in languages like Dutch or English.

In cases of verbal aspectual ambivalence, as here with *visited*, a preterit form ambiguous vis-à-vis aspect, perfectivity is triggered in sentences like (3a) as a result of mapping the temporal boundedness of the two situation-participant NP referents onto the V-referent (Diagram 9). Verkuyl (2001, pp. 378–386) does not subscribe to the mapping mechanism. But it is beyond doubt that, without a NP-V/V-NP transfer, (non)-boundedness in verbal and nominal referents would remain incapable of affecting the aspectual interpretations of verbs.

The verb is the prototypical exponent of a Vendlerian situation, either holding – as a lexical or grammatical item, or acquiring – by coercion, the two values. Therefore, the verb must be assigned the capability to acquire aspectual values brought about by the impact of sentence/context components. Note that temporal

(non)-boundedness is found in referents of both verbs and NPs. But when found in NPs, boundedness and non-boundedness are *not* called perfectivity and imperfectivity. When in verbs, non-boundedness is equalled with imperfectivity. But boundedness in verbs does not equal perfectivity – because perfectivity is boundedness *plus* reached telos. And whenever a sentence is said to be perfective or imperfective, the assumption is that these values are assignable to the verb too, although it does not encode them – when it is aspectually ambivalent. But it explicates them – after they are mapped onto it, as in (3).

In cases of imperfectivity – in Verkuyl's imperfective schema with a leak/leaks, the mapping is more complex. Described exhaustively in Kabakčiev (2019, pp. 210–212), here are its main points. A sentence beginning with *The tourist visited* is ambiguous as to perfectivity/imperfectivity, the hearer perceives this as an aspectually ambiguous string. Complemented with *the castle*, it becomes perfective. Complemented with *castles*, it yields imperfectivity – (3b). What happens is that *castles* is interpreted by the hearer as a non-bounded recurrent entity, and this entity is transferred onto the verb. Note that the direction of transfer is opposite to the flow of speech. Now the verb is perceived as signaling imperfectivity. But does the mapping/transfer stop here? No. The non-bounded recurrence feature of the V-referent is transferred farther back – onto the subject.

Note the huge difference between the subject-referents in (3a–b). In (3a) the subject-referent represents a one-off (single) instantiation in time. In (3b), conversely, it is a non-bounded recurrent (pluralized) kinetic entity. The same kind of mapping takes place in (3c), with the difference that the direction is from the subject onto the verb, and then from the verb onto the object. As for cases like (3d), there is mapping again, the direction being from the verb onto the NPs. Here the verb's stative nature overrides the tendency for NPs with articles, quantifiers, etc. to signal temporal boundedness, hence the V-referent's non-boundedness is mapped onto the two situation-participant NP-referents, suppressing and canceling their potential boundedness, despite the presence of an article or some other exponent of boundedness.

Let us now move on to VA languages, as shown in Table 2, with Russian translation equivalents of the English sentences in Table 1. Here situation-participant NPs play *absolutely no role* for effectuating aspect – there is direct encoding of perfectivity/ imperfectivity, not covert effectuation (explication) as in Table 1. In the other VA languages – Georgian, Greek, Bulgarian, the regularity is the same: the situation-participant NPs play no role for effectuating aspect. This is valid for Greek and Bulgarian despite the presence of a definite article (no indefinite). The definite article can in no way impact aspect effectuation, as aspect is directly expressed, not explicated. In Georgian, a language with VA and no articles, aspect effectuation is broadly the same as in Russian. Situation-participant NPs do not have an impact on it but are coerced by the verb into signaling certain values when the aspect of the verb is perfective, and other values when the verb is imperfective.

As already shown in the discussion of Finnish aspect, Verkuyl's schemata function as in English, with the difference that (non-)boundedness is effectuated through the case system in the absence of articles. As for VA languages, it must be concluded that Verkuyl's schemata are not directly applicable to them. But *they*

can be investigated through the schemata, taking into account the specificity of the V-NP interplay in the opposite direction, with the impact from the verb onto NPs.

However, even here things across languages are not as straightforward as linguists would like them to be. Dimitrova (2021) and Dimitrova and Kabakčiev (2021) show that, despite the definite article, Bulgarian functions in a way analogous to the other Slavic languages – the verb-encoded aspect maps certain values onto situation-participant NPs. Greek, however, features an idiosyncratic trait, an interplay in which values of situation-participant NP are mapped onto verbs marked for aspect, defacing the verb's grammatical aspect. Cf. (10a–b), from Dimitrova (2021):

- (10) a. I kóri mou denéchei diavásei<sub>PFVPERF</sub> poté kítrines efimerídes  
 The daughter my not has read never yellow newspapers  
 'My daughter has never read yellow newspapers'  
 b. Aftó to paidí den échei akoúsei<sub>PFVPERF</sub> poté klasikí mousikí  
 This it child not has listened never classical music  
 'This child has never listened to classical music'

In each sentence there is a perfective perfect verb form and a zero-article situation-participant NP (*kítrines efimerídes* 'yellow newspapers'; *klasikí mousikí* 'classical music'). These sentences ought to be perfective, they ought to express a Vendlerian accomplishment through the verb's perfectivity. But they do not. They are imperfective. The non-boundedness of each object-NP is mapped onto the verb and, despite the verb's grammatical perfectivity, it is coerced into imperfectivity (Dimitrova 2021). Serious questions arise: how should these Greek cases – that are systematic, not at all rare, be explained? As grammatical perfective aspect in the verb coerced into imperfectivity? Or as CA: Verkuyl's imperfective schema with an NP leak ultimately determining the aspect of a sentence in contradiction to the grammatically encoded VA? The answers to these questions are not easy and are left for future research – but in any case these Greek examples highlight the explanatory power of Verkuyl's theoretical model – working on specific VA-language data.

Note now that, apart from those in (4) with two situation-participant NPs, there also exist English sentences demonstrating simultaneously the interplay of quantification/ de-quantification not in two but in three sentence components that are situation participants. Cf. (11) – the first sentence is perfective, the other three imperfective:

- (11) a. The valet parked our car in the nearby garage.  
 b. The valet parked cars<sub>LEAK</sub> in the nearby garage.  
 c. The valet parked our car in nearby garages<sub>LEAK</sub>.  
 d. Valets<sub>LEAK</sub> parked our car in the nearby garage.

Such sentences, rare to find and difficult to construct (analyzed in Dimitrova and Kabakčiev 2021, p. 193, Kabakčiev 2021a, p. 4, 2021b, pp. 34–38, 2022, pp. 336–339), are perfect exemplars for revealing the quantification/de-quantification

interplay in which a perfective sentence is imperfectivized separately by each of the three NPs. Intriguingly, this interplay is also found in specific conditions in VA languages (Dimitrova and Kabakčiev 2021, p. 193), a circumstance forcefully corroborating yet again the thesis that *Verkuyl's CA model has an enormous explanatory power*. But it must be modified in certain ways to be able to realize its potential.

Finally note that Verkuyl insists that the leaks in his imperfective schema are not two but three, the third one being negation (Verkuyl 1993, 2022, pp. 90–91). Cross-language data, however, shows that negation cannot be a leak.

### **On Some Specific and Controversial Issues in Verkuyl's Monograph**

The main idea in Verkuyl (2022) is that not only can aspect be analyzed binarily, tense and modality also can, and actually must, despite the fact that a ternary approach to tense is usually used – in three domains (past, present, future). Aspect is generally analyzed binarily, through the perfectivity/imperfectivity contrast. To what extent a binary approach to tense is more rewarding scientifically than a ternary one will not be explored here. Let the future decide. But if the binary approach to tense is novel and well-represented in Verkuyl (2022), it seems to need some sophistication. The problem emerges early in the book, when the notion of temporality is assigned an extremely narrow sense. It is equaled with tense, and it is thus left out of consideration that there are many other linguistic entities that are temporal notions, related to time, including the major aspectual ones. Concepts employed by Verkuyl himself, e.g., (non)-boundedness, are not simply associated with time, they are directly time-related. Even the major exponents of aspect – perfectivity/imperfectivity, are time-related, conceptualized as properties of time, as a cognitive phenomenon (not a physical one). Temporalization in the sense of assigning the value “tensed” is obviously important for Verkuyl's enterprise. A better way could then be proposed for distinguishing “tensed” from the temporality of other aspectological and aspecto-temporal concepts.

Enormous space is allotted in Verkuyl's publications, including Verkuyl (2022), for interpreting sentences like *Three girls lifted two tables*, with an emphasis on the possibilities for “building quantificational structures”. Such analyses may be useful for capturing the semantics of certain sentences for the needs of computer-based language processing, digital translation, etc. But from a mainstream linguistic perspective they do not make much sense, in my opinion. Faced with *Three girls lifted two tables*, the hearer hardly starts to make computations as to how many table liftings were executed by this or that girl. Nor does the hearer become troubled with whether this sentence is perfective or imperfective, because clearly it can be both – knowledge of the world overrides the rules of Verkuyl's schemata. The hearer uses one's intuition and the available context to work out *only the most plausible possibilities* for interpreting such sentences. And if the context proves insufficient and/or intuition fails, such sentences are *simply left uninterpreted*. In grammatical analyses they are treated as questionable, problematic. Language is a flexible tool for the broad apprehension

and communication of actual or hypothetical worlds through cognitive and grammatical concepts. It is not mathematics. If mathematicians or formal semanticists are intrigued about how many table liftings were executed by every girl in every combination of girls and tables in such sentences, linguists are not. Being strange, such sentences do not – in my opinion at least – pose serious problems for linguistics.

### **On Some Other Issues in Verkuyl's Model of CA**

#### *On Temporal and Atemporal*

As already argued, assigning the meaning “tensed” to *temporal* creates issues: *temporal* is severely narrowed down to what is encoded by a grammatical value found in almost every verb in a sentence in languages like English. A problem occurs in cross-language terms. How can the meaning of *temporal* in the sense of “tensed” be upheld in languages in which the verb does not encode tense: Chinese, Malay? Given that dozens of sentences in English and other European languages are analyzed by Verkuyl as encoding tense – along with entities such as present perfect, aorist, imperfect that are not purely tense grammemes – exactly how will Chinese and Malay sentences be identified as realizing values such as preterit (an aspectually unmarked past), aorist (bounded past), imperfect (non-bounded past), present perfect? Even take Russian, a European language. Given that almost all Slavic languages lack perfects, how do we decide whether Russian *Maria napisala pis'mo* carries “the meaning” ‘Maria wrote a/the letter’ or ‘Maria has written a/the letter’? It is problematic to argue that these two English sentences carry two different meanings (perfect/non-perfect), precisely because in many languages they are compressed into a single sentence, with a single preterit verb form which can be said to house the perfect also and provide it a symbiosis with the preterit. Native speakers of “perfectless” languages certainly do not feel deprived: they understand each other perfectly without perfects. Therefore, if Verkuyl wants to see his theory applicable universally, he ought to take into account these issues.

In Verkuyl (1972), verb arguments (here called situation-participant NPs) were assigned temporality: according to Verkuyl (1972, pp. 96–97), +SQA and -SQA, NP features, “pertain directly or indirectly to the time axis”. But in 1993 Verkuyl gave up the temporal model he advocated in 1972 (read carefully the quotation above) to replace it with an atemporal one in which situation-participant NPs are purely atemporal creatures – which obviously means spatial. This decision, criticized harshly in Kabakčiev (2000), is not only reconfirmed in Verkuyl (2022), it is developed further, by refusing temporality even to verbs. Verbs turn out to be atemporal creatures too. Indeed, they are temporalized (tensed) but at the very last stage of aspectual composition (Verkuyl 2022, pp. 166–168). What strikes the eye in the diagram on page 167 (ibid.) explaining Verkuyl's current concept of aspectual composition is that, first, it applies to the strange sentence *Three girls lifted two tables*. Second, this sentence is assigned perfectivity – simply because of the NP quantification and in disregard for the “knowledge of the world” factor. Third, S-

level perfectivity is obtained mechanistically by “multiplication” of the bounded situation-participant NP *two tables* (Verkuyl 2022, p. 167). The idea of mapping temporal values between NP-V referents proves again not to be to the author’s liking. Certainly, among the most sacred rights of a scientist is to maintain one’s ground against all odds. But it appears that the rejection of the idea of mapping temporal values between NP- and V-referents underlies Verkuyl’s failure to provide a reasonable explanation of how his two schemata, otherwise ingenious and unquestionably valid for CA languages, can be related to the way aspect is realized in VA languages.

*On the Necessity to Recognize Default Meanings*

Verkuyl maintains that sentences have their aspectual readings based on “their quantificational structure”, reflected in the two schemata. More importantly, the aspectual readings are fixed. There is no way, Verkuyl (1993, p. 182) insists, for sentences like *Judith ate sandwiches* to be perfective. In Verkuyl (2022, p. 123) this position is reconfirmed: “the NP *sandwiches* [in *Judith ate sandwiches*] is [-SQA], just like *nobody* in [*Nobody ate sandwiches*]: their denotation cannot be determined as finite or bounded”.<sup>11</sup>

It is not true that *Judith ate sandwiches* and similar sentences cannot be perfective. Compare the sentence extended: *Judith ate sandwiches and is no longer hungry*. Here the phrase *ate sandwiches* and the verb *ate* are coerced into perfectivity by the extension, despite the outward non-boundedness of *sandwiches*. Furthermore, implicated here before *sandwiches* is the quantifier *some* (Kabakčiev 2000, p. 239, Bulatović 2022, p. 500) – sometimes called “silent *some*”. Recall that aspect coercion on verbs happens even in VA languages (Dimitrova 2021 about Greek, Dimitrova and Kabakčiev 2021 about Bulgarian and Greek); furthermore, in Greek this is a systematic phenomenon (ibid.). The thesis that sentences such as *Judith ate sandwiches* cannot be perfective is also refuted by other cross-language comparisons. Bulgarian (12a) below is indeed non-grammatical. But it is for another reason, a specific Aktionsart, not because the non-bounded *sandviči* is incompatible with the perfectivity of *izjade*; there exists another Bulgarian perfective verb, *hapna* ‘eat’, perfectly compatible with non-bounded NPs like *sandwiches*:

- (12) a. \*Judith izjade<sub>PfV/Aor</sub> sandviči.  
           ‘Judith ate sandwiches’  
       b. Judith hapna<sub>PfV/Aor</sub> sandviči.  
           ‘Judith ate sandwiches’

As already emphasized, Verkuyl’s desire to see his theory universal, applicable to all languages, *is not without grounds*. But it needs to be modified in ways that deviate from his overall approach – and must be made to comply with cross-language data.

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<sup>11</sup> See the following section on negation.



Verkuyl's (1993, p. 182) insistence that sentences such as *Judith ate sandwiches* cannot be perfective because *sandwiches* is -SQA reveals a weakness observed elsewhere too. His Dutch sentence (13a) and its English translation (13b) allow two different readings, imperfective/perfective (Verkuyl 2022, p. 61), despite the outward -SQA value of *liederen* 'songs'. What is more, when (13b) is transferred into the past, as in (13c), it explicates not two but three aspectually different readings: perfective, imperfective and quasi-perfective (called episode – Kabakčiev 2000, pp. 286–307), a bounded situation not brought to its telos (songs sung to the end):

- (13) a. Maria zingt liederen van Schubert en Brahms.  
 b. Maria will sing songs by Schubert and Brahms.  
 c. Maria sang songs by Schubert and Brahms.  
 d. Maria sang some songs by Schubert and Brahms.

When imperfective, based on the -SQA value of *songs*, (13c) describes past singing performances by Maria, temporally non-bounded. When perfective, seemingly countering the outward -SQA in *songs*, (13c) describes a Vendlerian accomplishment, a performance by Maria of several songs – with a silent *some* assumed before *songs*, cf. (13d) with *some*. As noted by Bulatović (2022, p. 500), sentences like (14a–b) are perfective with an implicated *some* (this time in the subject):

- (14) a. Passers-by signed the appeal.  
 b. Children found a bird.

But here is yet another difference: (14a) equally allows perfectivity/imperfectivity, while (14b) favors a one-off situation, as per “knowledge of the world factor”.

All this must have been recognized as a problem by Verkuyl who surely knows that sentences with zero-article NPs containing silent quantifiers are countless and pose a threat to the validity of the perfective schema. And his insistence that *Judith ate sandwiches* cannot be perfective does not solve the problem. It worsens it. A solution already proposed (Kabakčiev 2019, pp. 206–207) consists in differentiating between default (primary/prototypical/basic) and non-default (non-primary/non-prototypical/non-basic) readings of sentences. In its default reading, *Judith ate sandwiches* is imperfective due to the -SQA value of *sandwiches*. But it is perfective in a non-default reading, with a silent *some* before *sandwiches*. In fact, Verkuyl himself occasionally allows different aspectual readings of a sentence. For example, he argues that the set of receipts in (15a) can only be settled upon when it is clear that “the sentence is about one eventuality index *k* or about a series of these indices” (Verkuyl 2022, pp. 162–163):

- (15) a. John kept the receipts.  
 b. John kept the receipts for a year.

Put otherwise, sentences like (15a) have two major readings, one perfective – a one-off situation in which all the receipts are grabbed by John in a single instant, and another one, imperfective, with non-bounded iterativity – in which John receives and keeps receipts regularly in the past, one by one. But there is even a third reading, in which the situation is bounded – but not perfective because there is no telos achieved. This reading of (15a) – especially when it is complemented by *for a year*, see (15b), represents an episode, a Vendlerian situation (Kabakčiev 2000, pp. 279–307).

Episodes are not an exotic Vendlerian situation type. On the contrary, they have *huge* cross-language presence: English sentences with *for*-time and similar adverbials of limited duration, sentences in Romance languages with atelic verbs in the aorist, Slavic delimitative verbs, Bulgarian imperfective aorists, Greek aorists and imperfects with *for*-time and similar adverbials (Dimitrova and Kabakčiev 2021), etc. In (15a) the “knowledge of the world” factor urges the hearer to interpret the sentence as imperfective, indefinitely iterative, not as a situation encompassing the sudden withholding of all the receipts – because life experience tells people the indefinitely iterative reading is more plausible, despite the rules of Verkuyl’s schemata.

### **Other Weaknesses in Verkuyl’s Model: Negation, Mistreatment of Vendler’s Schemata, Incomplete Explanation of Temporal Adverbials, Failure to Pinpoint the Slavic-Germanic Aspect Difference**

#### *On Negation, Allegedly Encoding Imperfectivity*

In my opinion, this is the severest flaw in Verkuyl’s overall conception. In his advanced model, Verkuyl (1993) assumes the existence of a third possible leak in the perfective schema that leads to imperfectivization: negation. The thesis that sentences with a negative V/NP are durative (i.e., imperfective) is re-confirmed in Verkuyl (2022, p. 90): “negation is important for neutralizing the difference between terminativity and durativity”. A postulate derived from some idiosyncratic precept of formal logic or some branch of philosophy is adhered to: negation is incompatible with perfectivity because it generates a -SQA feature in NPs or -ADD TO in verbs. A negative subject or object, or a negative verb in simple sentences like (16) below, Verkuyl insists, *invariably make such sentences imperfective*:

- (16) a. Nobody entered.  
b. Mary wrote no letter.  
c. Mary did not write the letter.  
d. Mary has not written the letter.

Whatever sense this might make in whatever formal logic or philosophy, it is blatantly untrue in cross-language terms. There is *not a single Slavic language* in which a negative subject or object or a negative verb in sentences such as (16) can

coerce a sentence into imperfectivity. Cf. Bulgarian (17), perfect translation equivalents of (16), in which all the verbs are perfective:<sup>12</sup>

- (17) a. Nikoj ne vlez<sub>ePfvAor</sub>.  
Nobody not entered
- b. Mary ne napis<sub>aPfvAor</sub> nikakvo pismo.  
Mary not wrote no letter
- c. Mary ne napis<sub>aPfvAor</sub> pismoto.  
Mary not wrote letter-the
- d. Mary ne e napis<sub>alaPfvPerfect</sub> pismoto.  
Mary not is written letter-the

A negative subject or object or a negative verb *does not* lead to imperfectivity in Georgian too (Giuli Shabashvili, personal communication). Hence, the idea about negation as an exponent of imperfectivity constitutes a serious weakness in Verkuyl's model – because of preoccupation with concepts divorced from natural language reality. Despite criticism two decades ago – a whole chapter in Kabakčiev (2000, pp. 263–277) arguing that negation in the Slavic languages is fully compatible with perfectivity, Verkuyl (2022, p. 90) stands by his right of dissent and continues to insist that sentences such as (18) are imperfective simply because of the negation.

#### *Mistreatment of Vendler's Time Schemata*

Despite respecting Vendler's insight and having visited him in the US decades ago (personal communication with Verkuyl) out of scientific curiosity, Verkuyl (2022, pp. 1–3) heaps criticism on Vendler, labeling his schemata “Aristotelian-based naive physics” and a “roadblock to compositionality”. Leaving aside in what way physics or naive physics may have to do with language regularities and broadly language, a product of the collective human brain, the Vendlerian schemata are interpreted by Verkuyl (2022, pp. 113–116) as a quadripartition, hence an obstacle to the binary approach pursued by him. Verkuyl's criticism of Vendler is *difficult to understand* – not only for one but for several reasons.

First, Verkuyl's model of aspect *actually rests on Vendler's*, the latter dealing with terms different from Verkuyl's but underlying more or less the same concepts. Verkuyl's understanding of what happens at the VP-level entirely coincides with Vendler's: *caught dogs, drank wine, drank* and *ruled* said of a man are imperfective VPs, *caught a dog, drank a gallon of wine* and *died* said of the same man are perfective VPs – in both models (Vendler's and Verkuyl's). Vendler, in his inimitable essayistic manner, deals here expertly not only with VPs but also with the contribution of the verb as a lexical item to the aspectual semantics of a sentence: *drink* is primarily a state or an activity as a lexical entry

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<sup>12</sup> Imperfectivity is not impossible but implicates a rather specific meaning.

but, combined with bounded NPs, is an accomplishment or an achievement; and combined with non-bounded NPs (*drank wine*) is again a state or an activity.

Second, Vendler's classification is indeed nominally a quadripartition but it can equally well be used in a binary approach. It is common knowledge that Vendler's states and activities perfectly cover the notion of imperfectivity, and accomplishments and achievements precisely cover the notion of perfectivity.

Third, Verkuyl rejects Vendler's time schemata for being also "too Slavicist", where "Slavicist" stands for "an uncritical adoption of Vendler's quadripartition based on the notion of V and VP providing the aspectual value, not the sentence" (Verkuyl 1999, p. 113), see also Verkuyl (2022, pp. 1–9). My opinion differs radically. I myself am equally an Anglicist and a Slavicist, and equally critical of the Slavicists' long-time (since 1971) ineptitude and refusal to deal properly with CA, and of the Anglicists' condescension towards VA – assuming it must be some by-product of CA, resulting in a failure to identify its nature.

At first sight, there seems to be only one step between Vendler's and Verkuyl's models. It appears tiny and consists in recognizing the contribution of the subject to the compositional buildup. But the history of linguistics *proved this step to be gigantic*, extremely difficult to make, a circumstance admitted by Verkuyl himself, in his confession that *it took him ten years to accomplish it* (Verkuyl 1999, p. vii). Furthermore, as already pointed out, and obviously for the same reason – the difficulty to grasp the difference between VP- and S-level aspect, the literature continues to abound in publications persistently regarding CA not as S-based but as VP-based. In other words, Verkuyl's discovery of CA and his theoretical model are accepted as valid but at the same time drastically misconceptualized (Kabakčiev 2019, pp. 212–218). Verkuyl's vision of aspect in these publications is thus *illegitimately reduced to Vendler's*: aspect composed solely within the VP, not at the S-level. On the one hand, this has nothing to do with Verkuyl's unfair treatment of Vendler's model. On the other, the reason for the existence of vast numbers of publications incapable of making the step from VP- to S-level aspect might perhaps also be sought in *Verkuyl's own failure* to fully convince the aspectological community in the correctness of his S-level approach.

#### *Incomplete or Partly Inadequate Explanation of Temporal Adverbials*

Of course, Verkuyl (2022, pp. 196–209) deals with this issue, already banal in aspectology, of *in-time* and *for-time* adverbials, labeling them durational. This is a misnomer, in my opinion. Neither *in-time*, nor *for-time* phrases are durational adverbials. He could have called them temporal adverbials. But the term temporal would also be inappropriate, given that Verkuyl (2022) is focused on an extremely narrow meaning of the word temporal, namely "tensed".

Why are *in-time* and *for-time* adverbials not durational? *In-time* adverbials are not durational because the main thing they signify is not duration but the time needed for an eventuality to, first, effectuate itself, second, to end in an achieved telos. Recall that the term durational is related to Verkuyl's older term durative that he still uses but has – correctly – replaced it by "imperfective" in most (but not all) of his recent publications.

*For*-time adverbials are not durational for a number of reasons. First and foremost, they are not at all “imperfective” – recall that Verkuyl equals durational and imperfective. *For*-time adverbials do not impart imperfectivity to the phrase or clause or sentence they are complemented to. Compare (18a–b):

- (18) a. The neighbor drank beer.  
 b. The neighbor drank beer when he was younger.  
 c. The neighbor drank beer for ten years.  
 d. The neighbor drank the beer for ten days [here *the beer* is a keg of beer].

Sentence (18a) is imperfective, featuring an NP leak; (18b) is also imperfective, because *when he was younger* does not bound the relevant interval; *drank beer* remains an imperfective phrase. However, given that (18a) is imperfective, the “durational adverbial” (wrongly called so) *for ten years* in (18c) ought to make it either more durative or imperfective – should this somehow be possible. Or at least it ought to maintain the imperfectivity of (18a). Does it? Not at all! Precisely on the contrary, *for ten years* when complemented to (18a) makes the sentence quasi-perfective, explicating a Vendlerian situation termed episode (Kabakčiev 2019, Dimitrova and Kabakčiev 2021). The episode stands between Vendler’s imperfective situations state and activity and his perfective situations accomplishment and achievement. It represents a state or an activity that has been terminated (18c) or an accomplishment that is again terminated, but has not achieved its telos (18d).

Apart from “durational”, Verkuyl (2022, pp. 197–199) calls *for*-time adverbials “duration-measuring”. This makes more sense than “durational” but still does not match the essence of these adverbials and fails to differentiate them from *in*-time adverbials. Verkuyl (2022, p. 198) goes on to say, surprisingly, that “the *for*-adverbial in sentences such as *Mary walked for three hours* [...] operates on the VP”. This means that it does not operate on the subject, which reconfirms his refusal to accept NP-V/V-NP mapping as *the only adequate way* to explain CA vis-à-vis VA. Due to the presence of a single situation-participant NP, here it is actually very easy to explain the mapping. Even in traditional-grammar terms, the meaning of *for three hours* can be seen as mapped onto the meaning of the verb (*walked*). But traditional grammar stops here. With respect to the issue how *Mary* should relate to *walked for three hours* it is helpless. Conversely, the mapping mechanism launched in Kabakčiev (1984), later sophisticated (Kabakčiev 2000, 2019), has no problem in solving the issue. *Mary* is not a physical/material entity. *Mary* is a temporal entity, a one-off instantiation of the “ordinary individual *Mary*”, and this entity *Mary* exists, so to say, *for three hours*. Prior to and after the three hours, *Mary* also exists, but no longer as a one-off instantiation in time. And why does *Mary* have an extension of *three hours*? Because this is the value of the VP *walked for three hours*, and this value is mapped from the VP-referent onto *Mary*. As already established (Kabakčiev 2019, p. 212), aspect as a universal, cross-language phenomenon, constitutes

*an all-pervading and perpetual process of mapping temporal features between different elements of the sentence, mainly NPs and verbs –*

and it does not matter whether aspect is verbal or compositional.

*The Aspecto-Temporal Aorist-Imperfect Contrast in Terms of the Slavic-Germanic Aspect Difference*

There is a consensus in linguistics that, apart from the purely aspectual perfective-imperfective distinction, aspect also comes in the form of the aspecto-temporal aorist-imperfect hybrid contrast. Analyzing the French Passé simple, Verkuyl (2022, p. 239) finds that its analysis “is incompatible with the compositional approach”. Soon after that, his analysis of my Bulgarian sentences (19a–b) with perfective and imperfective aorists (Kabakčiev 2000, pp. 7–8) comes to the conclusion that “the plus-principle does not work for aorist tense forms” (Verkuyl 2022, p. 245) – to confirm a hypothesis that the aspecto-temporal grammemes aorist and imperfect also fail to match the two schemata:

- (19) a. Deteto izyade<sub>PfV Aor</sub> yabalkata.  
Child-the ate apple-the  
‘The child ate the apple’
- b. Deteto yade<sub>Impfv Aor</sub> yabalkata.  
Child-the ate apple-the  
‘The child ate the apple’ [as if with a *for*-time adverbial]
- c. Deteto yadeše<sub>Impfv Imp</sub> yabalkata.  
Child-the ate apple-the  
‘The child ate the apple [habitually or in the progressive meaning]’

It is common knowledge that the Bulgarian perfective aorist covers the Slavic perfective past. Therefore, as noted by Verkuyl (2022, p. 243), it is the semantics of the imperfective aorist that could be regarded as problematic. However, as the imperfective aorist matches the semantics of *for*-time adverbials (see above), it is no riddle at all. In Bulgarian it is a residual product of the occurrence (at some point in the language development) of the imperfect, which serves to eliminate the boundedness triggered in sentences like (19c) by the definite article (Kabakčiev 1984). The English progressive executes the same function, described long ago (Kabakčiev 2000, pp. 168–180), namely, to eliminate the NP-boundedness of situation participants triggered by the article in sentences such as *A/the kid ate a/the fig*. Similarly, the Greek imperfect also, formed from imperfective verbs only, serves to eliminate the NP-boundedness of situation participants triggered by the definite article (Dimitrova and Kabakčiev 2021).

### On the Massive Misunderstanding of the Quintessence of CA

There are hundreds of publications, impossible to inventorize, in which Verkuyl's model of CA is held to be valid, on the one hand. But, on the other, researchers in most cases completely fail to grasp the CA-VA difference. Two major examples of this misunderstanding are Borer (2005) and Borik (2006). They insist almost in one voice that there is "violability" in Verkuyl's generalization when it is applied not to Dutch/English but to Slavic or similar VA languages. They fail to realize that Slavic are not CA- but VA-languages, yet ultimately CA and VA are manifestations of *the same universal phenomenon* – and are *mirror images* of each other. See Borer's and Borik's inadequate treatment of "Verkuyl's generalization" in Kabakčiev (2019, pp. 212–214).

Misunderstanding of CA is also demonstrated in numerous other recent and less recent publications belonging to the so-called incremental-theme trend (Krifka 1989, 1992, 1998, Filip 2000, 2017, Padučeva 2004, MacDonald 2012, Tatevosov 2015, Czardybon and Fleischhauer 2014, Fleischhauer and Czardybon 2016, Martin et al. 2020). Failing to conceptualize the hallmark of Verkuyl's theory, that the CA-domain is the sentence, something distinguishing it from Vendler's conception that VP is where aspect resides, the advocates of the incremental-theme approach flaunt an idea appropriate for a fairy-tale. In sentences such as (20a) they claim that the spatially bounded entity *the apple* performs a Cinderella-like metamorphosis, jumping from a physical feature – of the apple, into a temporal one – of the verb. They insist that there even exists "a science called mereology" explaining the Cinderella-like transfiguration. When the entity *the apple* is consumed to the end, its spatial feature boundedness, marked by the article (vs the zero article), is mapped onto the V-referent and this spatial feature miraculously turns into a temporal one there – temporal boundedness with an achieved telos (perfectivity). The fairy-tale metamorphosis is perfectly articulated by Padučeva (2004, p. 50): "the boundedness of a situation in time arises on account of the boundedness of the incremental object in space". The proponents of this idea, conceptualizing aspect as located in the VP, demonstrate lack of understanding of Verkuyl's fundamental postulate: that CA is an S-level phenomenon. If they had this understanding, they would have guessed that there are sentences in which perfective phrases like *ate the apple* can easily be coerced into imperfectivity (20b), cf.:

- (20) a. The child ate the apple.  
 b. Ants ate the apple on the floor incessantly.

In (20b) this temporal non-boundedness, mapped onto the V-referent by the subject-referent is then mapped from the V-referent onto the initially perfective phrase *ate the apple*, coercing it into imperfectivity. Hence *the apple* becomes a temporal entity, a recurrent kinetic object with no start- and end-point in time, which makes it radically different from *the apple* in (20a), where it is a temporal entity with a definite start-point (when the eating begins) and a definite end-point (when the eating ends). Note also that in (20b) the apple is, as it were, never

finished: ants cannot eat a whole apple with the skin. See criticism of this popular yet incongruous fairy-tale explanation, upheld in numerous articles belonging to the so-called incremental-theme trend, in Kabakčiev (2018, 2019, pp. 214–218). What is more, the faulty explanation bypasses the following honest admission by an advocate of the incremental-theme trend (Krifka 1992, p. 44):

*Take as an example the reading of a book; every part of the book corresponds to a part of the reading and vice versa. With other thematic relations, these properties normally do not obtain; for example, there is no correspondence between parts of the person that is reading and the reading event.*

Aspect is realized at the S-level – with no exception at all, and the impact of the subject is described fully consistently in Verkuyl (2022, p. 125) and throughout his decades of research (Verkuyl 1993, p. 23, 1972, p. 104), with examples such as (21)–(23):

- (21) a. Policemen walked from the Mint to the Dam.  
      b. Greetje walked from the Mint to the Dam.
- (22) a. For months patients here died of jaundice.  
      b. These two patients died of jaundice.
- (23) a. Bombs exploded everywhere in town.  
      b. The bomb exploded.

The (a) sentences are imperfective. Non-boundedness, explicated by the zero article, is mapped onto the V-referent – coercing it from aspectual ambivalence into imperfectivity. Sentences (b) are perfective. Boundedness, explicated by an article, a demonstrative (*these*) or a proper name (*Greetje*), is mapped onto the verb coercing it from aspectual ambivalence into perfectivity. Sentence (23a) explicates imperfectivity for the following reason. The referent of the NP *bombs* is interpreted by speaker/hearer as a non-bounded temporal series of occurrences with no definite start- and end-point – bomb explosions, and *not a set of bombs*, physical objects located somewhere in space. Conversely, (23b) explicates perfectivity, because *bomb* is interpreted by speaker/hearer as a bounded occurrence, a bomb explosion – not a bomb as a physical object located somewhere in space.

The failure to properly conceptualize CA is reflected in the way of handling the illustrative material in hundreds of publications. Examples are used predominantly with subjects represented by proper names and pronouns, almost never with zero-article situation-participant NPs – that can show the role of the subject. Contrary to the massive unawareness in numerous articles and monographs of the fundamental CA regularities, two recent papers subscribing to Verkuyl's theory (Bulatović 2020, 2022) not only demonstrate perfect understanding of it, they pour devastating criticism onto English grammars and the global system of teaching English for their lack of knowledge of CA and the article-aspect interplay. But Verkuyl himself, strangely, sidesteps these grave omissions in grammars. This may have to do with humbleness or indisposition to declare the status of CA. Therefore, let me spell it



out for him. CA is not “gaining ground”. It is a breakthrough in linguistics, recognized long ago (Kabakčiev 1984).

### Prospects for the CA Theory

Along with Leiss’ (2000) diachronic theory of the birth of a definite article (and later an indefinite one) in the history of the Germanic languages triggered by the demise of VA, the CA theory has already been employed for clarifying serious issues in the development of English through the centuries, related to the *raison d’être* of the article, its previous absence and its emergence between Late Old English and Early Middle English (Kabakčiev 2021b). With the conception of aspect as an all-pervading and perpetual process of mapping temporal features between sentence elements (Kabakčiev 2019, p. 212), it can provide a definitive explanation of aspect in *any* natural language – both synchronically and diachronically.

Verkuyl’s and similar models of CA – properly architected and applied, can radically change grammars of English and other languages, even of VA languages.<sup>13</sup> Bulatović (2020, 2022) argues that while CA and the article-aspect interplay have been banal topics in theoretical linguistics for decades after the discovery of CA, they are still a sad *terra incognita* in English language teaching, despite the immense significance of this language for world communication. The two phenomena are not simply valid, she argues. They are so hugely important that they must be taught not only to speakers of VA languages, they must be taught *to all learners of English*, including native speakers.

### Conclusion

Verkuyl’s latest book crowns his “oeuvre” spanning a period of some six decades of creative insight, represented by several monographs and countless papers. Despite certain mistakes, faults and the limitations of an approach heavily relying on bizarre concepts of formal logic and philosophy, some of them distanced from natural language reality, Verkuyl’s enterprise marks a new era in modern linguistics, allowing such cross-language and universal generalizations to be made – not always from his own perspective – that were unthinkable and unimaginable earlier. Today and in the foreseeable future it remains to be recognized by the world linguistic community that, despite an analysis too heavily based on Dutch and English, despite a failure to identify the essence of Slavic aspect and VA in general, despite flaws due to the specificity of formal logic, despite contradictions in semantic descriptions of certain sentence types, despite a rigid approach disallowing non-prototypical aspectual meanings of sentences belonging to either of the two schemata, despite some other mistakes and omissions,

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<sup>13</sup>VA languages feature CA, albeit peripherally (Dimitrova 2021, Kabakčiev 2021a).

*it undoubtedly takes nothing short of a genius to be able to see – through the thick curtain of innumerable, intricate and controversial data in numerous domains – the system of explicating perfectivity and imperfectivity in non-VA languages.*

Verkuyl managed to capture mentally and conceptualize in depth the monstrously complex system of CA, something no one had ever planned to do, let alone managed, something earlier thought impossible to achieve, something still misunderstood by most linguists. He crafted with precision two almost faultless aspectual semantico-syntactic schemata for CA languages that – with some modifications – are applicable to VA languages as well, which ultimately means universally, for all languages, with no exception at all. Verkuyl's aspectual schemata will go down in history as benchmarks in linguistics together with Vendler's (and his colleagues') time schemata, with Verkuyl's theoretical model on a higher footing, due to the identification of the operation of CA at the S-level and the incorporation into the model of the impact of the subject and the precise contribution of the semantics of the verb.

It remains for the linguistic community to live up to this epochal achievement by carrying out a reform in aspectology – because the CA theory remains severely misconceptualized. It needs to be understood properly, certain modifications and improvements must be introduced in it and incorporated into the existing models for carrying out future successful studies of the intriguing phenomenon of aspect – whether in verbal or compositional disguise.

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