

On the History of Compositional Aspect: Vicissitudes, Issues, Prospects

Compositional aspect (CA) is a fundamental language phenomenon found in 1972 by the Dutch linguist Henk Verkuyl. It is the mechanism of explication at the level of the sentence of the values of perfectivity and imperfectivity, otherwise found in verbs as lexical entries in Slavic and some similar languages. Its discovery ultimately made a huge breakthrough in linguistics, but the recognition of its significance came after years and decades of misunderstanding and twists and turns in conceptualization. Even today, nearly half a century after the discovery of CA, the theory behind it remains rather misconceived, despite the sea of publications dealing with it. This paper offers an overview – through the eyes of the author, hence inevitably polemical – of some of the history of CA, with its vicissitudes, issues and, most significantly, prospects.

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Compositional Aspect – Some of its History

CA is a fundamental language phenomenon, discovered by the Dutch linguist Henk Verkuyl in 1972 on Dutch and English data. Entitled *On the Compositional Nature of the Aspects*, Verkuyl's (1972) work made a gigantic breakthrough in the understanding of the aspect that dominated linguistic theory at that time – although, as we shall see, the impact of the discovery of CA on linguistic thinking was far from sudden. It materialized slowly through

1 the years and decades, and the process of the recognition of CA by the
 2 aspectological community has not ended to the present day. The theory of CA
 3 is now almost half a century old and this review of its development contains
 4 facts from the more distant history too – for a better understanding of what
 5 happened in the past and what is happening today.

6 Previous conceptions in linguistics, to the end of the 1960s, maintained
 7 that aspect – not only called verbal aspect (henceforward VA) until then but
 8 also regarded solely as such, represented exclusively by verbs as lexical entries
 9 and restricted to the Slavic languages, plus some others, as a heritage of Proto-
 10 Indo-European. Reigning unchallenged in aspectology until the 1980s was
 11 Jakobson’s (1957) idea that aspect is a category *per se* that has nothing to do
 12 with the participants in an event or a state – in contrast to, for example, voice.
 13 Actually, as will be demonstrated soon, aspect is *precisely the opposite*: a
 14 phenomenon inseparably linked to the participants in situations.¹

15 In Verkuyl’s (1972) theory, aspect, represented by the distinction between
 16 perfectivity and imperfectivity,² is not a feature of the verb or the VP but of the
 17 whole sentence, and its effectuation takes place within two semantico-syntactic
 18 schemata, a perfective and an imperfective one. Entities with different semantic
 19 and grammatical properties take part in the schemata. Perfectivity is a situation

¹ “Participants in situations”, also called “nominal sentence components (or nominals) taking part in the explication of aspect”, is my term, launched in Author (1984b: 670); the one more frequently employed is “arguments”. I take participants in situations to be a term better suited to CA analyses.

² Verkuyl (1972) used the (now exotic) terms non-durativity (for perfectivity) and durativity (for imperfectivity).

1 (in terms of Vendler's 1957 model of situations),³ which is temporally bounded
 2 and has an initial and an end point. These two points, together or separately,
 3 can be subsumed in a simple sentence/clause or outwardly given. A perfective
 4 situation, apart from being temporally bounded, is also normally "brought to a
 5 natural end", whereby the "natural end" is interpreted in pragmatic terms, as an
 6 inherent result of the situation on the arrival at the end point.^{*4} It broadly
 7 corresponds to the Slavic notion of perfectivity. Conversely, imperfectivity is a
 8 temporally non-bounded situation – whether or not an initial and/or an
 9 endpoint are present or subsumed in it, whether it describes a generally valid
 10 state of affairs (*Birds fly*) or a current activity (as in the English progressive),
 11 or an indefinitely repeated event (*I wake up early*). It broadly corresponds to
 12 the Slavic notion of imperfectivity.

13 Unfortunately, as often happens with revolutionary findings, Verkuyl's
 14 work first met with reactions that were not exactly negative but were not
 15 enthusiastic either. Critics accepted his major assertions but regarded the
 16 newly-discovered phenomenon as peripheral, with a restricted scope. Most
 17 importantly, they saw no link between CA and aspect in Slavic (Dahl 1975;
 18 Comrie 1976). Until the end of the 1960s the established view in linguistics
 19 was that not only is there no Slavic-like aspect in English but that seeking
 20 possible manifestations of it is a waste of time (Zandvoort 1962; Dušková

³ Vendler's classification of situations, consisting of four members, states, activities, accomplishments and achievements, is so widely known today that knowledge of it presupposed.

⁴ This is valid for prototypically perfective situations. There are non-prototypical perfective situations as well, temporally bounded but lacking the pragmatically interpretable feature "brought to a natural end". I term these "episodes" (Author 2000: 279-307) – represented by Slavic delimitative verbs, Bulgarian imperfective Aorists, English *for*-time adverbials, etc. They will not be explored here.

1 1983). However, against the background of the circumstance that until the
 2 1970s aspect in languages like English was a virtual *terra incognita*, Verkuyl's
 3 work gradually started to gain recognition. Today his contribution to linguistic
 4 theory with the discovery of CA is widely acknowledged, as evidenced in
 5 hundreds of publications worldwide dealing with CA in one way or another.
 6 But the mass enthusiasm about CA rarely translates into a truly adequate
 7 understanding of it.

10 Verkuyl's Theory

12 Underlying Verkuyl's theory is Vendler's (1957) classification with its
 13 four members – states, activities, accomplishments and achievements, but CA
 14 is a radical development of it. Vendler's (1957) classification mainly rests on
 15 the semantics of verbs and verb-noun collocations. Verkuyl's CA is explicated
 16 at the level of the sentence.

17 Why explicated and not expressed? Because explication, or signaling, is
 18 the indirect, covert signification of something, in contrast to its direct
 19 expression (denotation/marketing/encoding).⁵ To give an example, in modern
 20 linguistics today (based on English) there is not a shade of a doubt that: (i) a
 21 sentence such as (1a) below is perfective, in contrast to (1b), which is
 22 imperfective; (ii) sentence (1a) is equivalent to a sentence with a perfective

⁵ I proposed the notion "explication" in Author (2000). In my English grammar (Author 2017), I mainly use the term signaling for the same phenomenon.

1 verb in Slavic, cf. Russian (1c); (iii) sentence (1b) corresponds to a sentence
 2 with an imperfective verb in Slavic, cf. Russian (1d):

3

- 4 (1) a. The boy ate a fig
 5 b. The boy ate figs
 6 c. s'elPFV smokvu
 7 'The boy ate a/the fig'
 8 d. Mal'chik elIMPFV smokvy
 9 'The boy ate figs'

10

11 However, while the Russian verb *s'el* 'ate' is marked for perfectivity, the
 12 corresponding English verb *ate* is **not** – as can easily be seen from the
 13 comparison between (1a) and (1b), two aspectually differing sentences
 14 containing the same verb form. Therefore, while Russian *s'el* 'ate' expresses
 15 perfectivity, English *ate* only explicates/signals it. The same with Russian *el*
 16 'ate' in (1d) – it expresses imperfectivity, while English *ate* in (1b)
 17 explicates/signals it. On a side note, the fact that today nobody in the linguistic
 18 community doubts the perfectivity of an English sentence such as (1a)
 19 represents proof that there is progress in scientific thinking. Prior to 1972 an
 20 assertion in linguistic circles that (1a) is perfective and that (1b) is imperfective
 21 would either be laughed at or treated as heresy. But progress in linguistic
 22 thinking does not necessarily equate an adequate understanding of CA.
 23 Convinced that an English sentence such as (1a) is perfective, many

1 aspectologists are still unable to grasp the true reasons why it is perfective, see
2 below.

3 Let us return to Verkuyl's (1972) theory. His sentences (2) explicate
4 perfectivity, due to the presence of determiners, including articles, proper
5 names or similar bounding elements in the nominals, plus a telic meaning of
6 the verb as a lexical entry:

7

- 8 (2) a. Katinka knitted a Norwegian sweater
9 b. Greetje walked from the Mint to the Dam
10 c. Den Uyl gave the Labor Party badge to a congress-goer
11 d. Fritz played Schumann's cello concerto

12

13 Conversely, Verkuyl's sentences (3) explicate imperfectivity, due to the
14 so-called imperfective leaks (Verkuyl 1993: 232-233). At least one leak must
15 be present for a sentence in (2) to turn into an imperfective one:

16

- 17 (3) a. Katinka knitted Norwegian sweaters
18 b. Policemen walked from the Mint to the Dam
19 c. Den Uyl gave the Labor Party badge to congress-goers
20 d. Fritz hated Schumann's cello concerto

21

22 The leaks, henceforward called Verkuylian in honor of their finder, are: a
23 bare plural in the direct object (3a), the subject (3b), the indirect object (3c); an
24 atelic lexical meaning of the verb (3d). Thus, as can be seen from the

1 comparison between (2) and (3), the perfective or imperfective value of an
 2 English sentence may depend, *inter alia*, on the lexical properties of the verb,
 3 cf. (2d) and (3d) – *played* is a telic verb, *hated* is an atelic verb, or the presence
 4 or absence of an article or a similar determiner – cf. the other pairs in (2) and
 5 (3).

6 But, despite the fact that languages like English lack aspect in verbs as
 7 lexical entries⁶ and feature a regular pattern of a definite and an indefinite
 8 article, while, conversely, Slavic languages feature verb aspect and most of
 9 them have no articles, neither Verkuyl, nor the already innumerable followers
 10 of CA theory pay the necessary attention to the article – if they notice it at all.
 11 Instead of studying its all-round impact in – and on – the structure of language,
 12 they subsume it under notions such as *determiner* or *quantifier* and sidestep it
 13 (Filip 2000; 2017; Młynarczyk 2004; Borer 2005; Borik 2006; MacDonald
 14 2012; to name but a few). Some authors, apart from rejecting without any
 15 argumentation the aspectual function of the article, even separate the definite
 16 article from the indefinite one. Instead of viewing *a* and *the* as a unified entity,
 17 “the article”, serving the explication of perfectivity (in contrast to the zero
 18 article – serving the explication of imperfectivity), they insist that the definite
 19 article has nothing to do with aspect (Młynarczyk 2004;
 20 Fleischhauer&Czardybon 2016; see Author’s 2018 response), ignoring tons of
 21 argumentation provided years earlier (Author 2000). Some (Berezowski 2011)

⁶ Aspect is a grammatical category found in Slavic verbs as lexical entries. A verb is either perfective or imperfective, save for biaspectual verbs, a relatively small group. English also features grammatical aspect – with the progressive, an imperfective aspect restricted to ongoing situations. But the progressive is not located in verbs as lexical entries. It is marked on them through the *be* + *-ing* construction in their syntactic realization. The same with the *used to* + *inf* and *would* + *inf* constructions that encode imperfective aspect – in its habituality variant.

1 explore the zero article and make no mention of its unbounding function;
 2 others (Husband 2012) ignore the article (*the&a*) despite handling Verkuyl's
 3 theory – because aspect for them is the individual-stage distinction (see below),
 4 not the perfective/imperfective one.

5 CA is impossible to understand adequately without recognizing that
 6 perfectivity, as in (2), and imperfectivity, as in (3), are only **primary**
 7 **interpretations**, i.e., prototypical, default, basic readings of sentences, not
 8 semantic values fixed on them once and for all (Author 2000: 59, 137). I find it
 9 a weak point in Verkuyl's theory that this circumstance is not accounted for.
 10 The default (basic/primary/prototypical) nature of aspectual values of sentences
 11 can be demonstrated through time adverbials. For instance, adding an adverb of
 12 non-bounded iterativity (*often, regularly, from time to time*) changes a sentence
 13 such as (1a) from a perfective into an imperfective one, cf. (4a) below; adding
 14 adverbials signifying a sudden change of state turns prototypically imperfective
 15 sentences like (3d) into perfective ones (4b):

- 16
 17 (4) a. Katinka often knitted a Norwegian sweater
 18 b. Fritz suddenly hated Schumann's cello concerto
 19

20 A counterargument to the effect that (4) are new sentences, i.e., not those
 21 in (2a) and (2d), is not valid, as it is clear that aspect-changing adverbials can
 22 linger in the surrounding context and still exercise their effect. The addition of
 23 aspectual elements (too many and too complex to be described here) and the
 24 general impact of context often interfere with Verkuyl's perfective and

1 imperfective schemata and alter the initial aspectual readings of sentences
 2 (Author 2000). Furthermore, there are pragmatic constraints and triggers
 3 influencing Verkuyl's schemata and changing default aspectual values. I
 4 subsume these under the label "knowledge of the world" (Author 2000: 309-
 5 326). The various factors altering the explication of perfectivity and
 6 imperfectivity make CA theory hard or even very hard to understand. But this
 7 cannot, of course, detract from its significance.

8 One of the most important theses in Verkuyl's model, emphasized by
 9 Dowty (1979: 64), is that "the sub-categorization with respect to aspect must
 10 take place at an even higher node than the VP". This means, for example, that
 11 (5a) below is a perfective sentence, but it would be a mistake to think that its
 12 perfectivity is solely or mainly due to the perfectivity of the VP *visited a castle*
 13 vis-à-vis the imperfectivity of *visited castles*, as in (5b). The perfectivity of (5a)
 14 is due *simultaneously* to the boundedness of *the tourist* and *a castle* and the
 15 presence of a telic verb, *visited*, the three elements *together* allowing (5a) into
 16 the perfective schema. Should a Verkuylian leak appear in any of the three
 17 components of (5a), or in more than one, the resulting sentence is imperfective.
 18 See below: (5a) is perfective (precisely why – to be explained); (5b) is
 19 imperfective because of an object leak (*castles* – unbounded by the bare
 20 plural); (5c) is imperfective because of a subject leak (*tourists* – non-bounded);
 21 (5d) is imperfective because of a leak in the verb (*knew* – atelic, in contrast to
 22 *visited* – telic). Finally, (5e) is imperfective because of two Verkuylian leaks:
 23 one in the subject, another in the object (Verkuyl 1972; 1993):

24

- 1 (5) a. The tourist visited a castle
- 2 b. The tourist visited castlesLEAK
- 3 c. TouristsLEAK visited a castle
- 4 d. The tourist knewLEAK a castle
- 5 e. TouristsLEAK visited castlesLEAK

6

7 Within a decade after the appearance of Verkuyl's (1972) work, many

8 separate features of his theory were considered and duly recognized (Friedrich

9 1974; Schopf 1974: 56-58; Zydatiņ 1976: 54; Heinämäki 1978: 10; Dowty

10 1979: 3-64; Markkanen 1979: 54-57; Carlson 1981; Mourelatos 1981).⁷

11 However, an extremely important element escaped the attention of researchers

12 or was inadequately analyzed: the link between CA, as found in English, and

13 VA, as in Slavic. It was revealed in 1984, in two articles of mine (Author

14 1984a; 1984b), which demonstrated the cross-language significance of CA.

15 Elements of language structure, viz., the presence of verb aspect, as in Slavic,

16 and the regular pattern of an article (definite and indefinite), as in Germanic,

17 underlie the big difference between the two groups of languages. In a

18 publication dealing with English aspect Bulatović (2013: 65) points to the

19 works of Vendler, Verkuyl and Author as "the cornerstones of what is known

20 today as compositional aspect" – a laudatory assertion but in need of an

21 explanation of what I did. After the two 1984 papers I first made a detailed

22 assessment of Verkuyl's theory (Author 2000) in both his initial work and its

⁷ The term *compositional aspect* was launched not by Verkuyl (1972) but later, by other authors. The first one to use it was probably Friedrich (1974: 37).

1 later version (Verkuyl 1972; 1993)⁸. Second, I developed my initial
 2 understanding of aspect in the two papers – which provided a universal picture
 3 of aspect, based simultaneously on cognition and language structure (Author
 4 2000). Third, I rendered CA in languages like English as *a mirror image* of
 5 VA in Slavic and similar languages, and, consequently, VA in Slavic as a
 6 mirror image of CA in Germanic (Author 2000: 153-161). Fourth, the idea of
 7 CA as a mirror image of VA – and vice versa, is, however, impossible without
 8 prior acceptance of some major assumptions, most essential of which is the all-
 9 pervading temporality of participants in situations (discussed below).
 10 Regrettably, the temporality of participants remains largely ignored or
 11 misunderstood today, and the necessity to disperse doubts surrounding the idea
 12 of the temporality of participants in situations lies in the focus of this paper.

13

14

15 **More on Primary and Secondary Readings of Sentences**

16

17 As already pointed out, one of the differences between Verkuyl's CA
 18 model and mine is that he assigns strict aspectual values to sentences.
 19 According to him, (2) are invariably perfective sentences, (3) invariably
 20 imperfective. This is an inference based on Verkuyl's (1993: 182) insistence
 21 that there is no way for sentences such as *Judith ate sandwiches* to be
 22 perfective. But it is simply not true that sentences like *Judith ate sandwiches*
 23 cannot be perfective – a point analyzed in Author (2000: 239). There can

⁸ The analysis of Verkuyl's work occupies a large part of my 400-pages monograph (Author 2000).

1 hardly be a perfective English sentence for which an imperfective context
2 cannot be found; there can hardly be an imperfective English sentence
3 structured along the lines of CA for which a perfective context cannot be found
4 – or specially built. Preoccupied with finding and selecting language data and
5 preparing the complex argumentation for the validity of his schemata, it is
6 understandable why Verkuyl did not envision sub-rules: sub-rules that would
7 allow perfective sentences to be sometimes imperfective, as an exception, and
8 imperfective sentences to be sometimes perfective, again as an exception.
9 Another reason seems to be “aesthetic”. Verkuyl, a true scientist, is clearly
10 prone to perceiving CA rules as approximating the exactness of rules in natural
11 sciences, e.g., physics. His two schemata are such a solid basis of CA that
12 soiling their beautiful structure with “pragmatic stuff” such as secondary
13 readings probably appears a sacrilege to him (cf. Verkuyl 2001). Language,
14 however, is first and foremost a pragmatic tool. Hence its structure, too,
15 addresses ordinary human needs and cannot necessarily be expected to
16 approximate laws like those of physics. Guided by this understanding, I posited
17 rules to the effect that sentences like (2) are perfective as a default
18 (primary/prototypical/basic) reading, and that, analogously, sentences like (3)
19 are imperfective as a default (Author 2000; 2017).

20

21

22 **On the Temporality of Participants in Situations**

23

1 But the largest difference between the two models, Verkuyl's and mine,
 2 lies in the treatment of participants in situations (Verkuyl's "arguments").⁹ In
 3 his initial work Verkuyl (1972) assigned temporality to arguments. When the
 4 relevant NPs contain determiners and quantifiers such as articles (*a/the*),
 5 demonstratives, possessives, proper nouns, numerals, etc., the participants are
 6 quantified. Without these elements they are non-quantified.¹⁰ The relevant NPs
 7 contain the semantic information 'specified quantity of X' – when quantified,
 8 and 'unspecified quantity of X' – when non-quantified. To quote precisely
 9 (Verkuyl 1972: 96-97), the notions 'specified quantity of X' and 'non-specified
 10 quantity of X' "pertain directly or indirectly to the time axis". Furthermore,
 11 "the quantities of X involved are expressible in terms of linearly ordered sets of
 12 temporal entities" (ibid.). These statements on "quantified" and "non-
 13 quantified" are not unambiguous. But the following one leaves no doubt as to
 14 the temporal nature of participants: "the category SPECIFIED could be
 15 characterized as 'giving the bounds of the temporal interval in question'; the
 16 category UNSPECIFIED as 'not giving the bounds of the temporal interval in
 17 question'. Since the expression 'giving the bounds of an interval' involves
 18 referential information, SPECIFIED is provisionally located in the Determiner"
 19 (Verkuyl 1972: 59). Note that this assertion also amounts to an

⁹ A side note concerning arguments. I reject the idea that arguments can be internal and external in aspectological terms, as in Verkuyl's (1993: 21) "asymmetry of arguments" (Author 2000: 235-238). I treat all participants in situations as equal in status. Asymmetry has nothing to do with CA, it is a notion in transformational-generative theory handling the tree-representation of the distribution of subject- and object-NPs (Author 2000: 238).

¹⁰ "Quantified" is Verkuyl's term. Other studies employ the term "quantized" – with the same meaning.

1 acknowledgment that the article, being a determiner, is a marker of temporal
2 boundedness on nominals – another major issue in CA theory.

3 Thus in my two papers outlining the significance of CA and its
4 relationship with VA (Author 1984a; 1984b) I subscribed to the idea in
5 Verkuyl's (1972) first work, ground-breaking and inspiring, of participants in
6 situations (arguments) as temporal entities. It was precisely on this basis that I
7 built the theory of the inverse interdependence of markers of boundedness –
8 which encompasses the mechanism of mapping temporal values between
9 nominal and verbal components. Verkuyl's (1993) withdrawal from the idea of
10 the temporality of participants, completely unmotivated, did not, of course,
11 change my position. It only led to my harsh criticism of this unexpected change,
12 between 1972 and 1993, in Verkuyl's thinking (Author 2000: 66-67, 94ff).

13 In contrast to Verkuyl's approach – temporal in 1972, atemporal in 1993, I
14 have always maintained one in which all participants in situations, e.g., those in
15 sentences (2) through (5) above, are *purely temporal entities*, with values
16 (boundedness/non-boundedness, with sub-features) that ultimately coincide
17 with the temporal value of the verb in the sentence/clause. Thus *the tourist* and
18 *the castle* in *The tourist visited the castle* are temporal entities, bounded. Their
19 temporal boundedness is, first, marked by the article, then mapped onto the
20 referent of the verb (Author 2000: 123-151).¹¹ Conversely, *castles* in *The*
21 *tourist visited castles* is a non-bounded entity whose temporal non-
22 boundedness in the form of indefinite iterativity is marked through the zero

¹¹ The mapping of temporal features onto the referent of the verb is possible because the English preterite (the past indefinite tense) has no aspectual meanings of its own. It can be likened to an empty bag (Author 2017: 227) that can accommodate any aspectual value arising in the sentence or context.

1 article and the marker of plurality. The non-boundedness of *castles*, including
 2 the sub-feature indefinite iterativity, is mapped onto the verb, making its
 3 referent non-bounded. And, in order to take part in the situation *visited castles*,
 4 *the tourist* itself must be a temporal entity. In even simpler terms, for an
 5 observer to be able to utter *The tourist visited castles*, depicting an indefinitely
 6 recurring situation, s/he must have observed (been told about, imagined) a
 7 “moving picture” of a tourist visiting castles. It cannot be the case that *the*
 8 *tourist* is a “physical entity” beyond time, as it were, divorced from the rest of
 9 the sentence/proposition, i.e., from *visited castles*. Analogously, viewed from
 10 the angle of *the tourist*, the participant *castles* in *The tourist visited castles*
 11 cannot be a static picture consisting of castles standing simultaneously on
 12 neighboring hills. In the imperfective reading of this sentence *castles* is also a
 13 “moving picture” – of a non-bounded time series of castles, appearing one after
 14 the other, each castle successively visited by *the tourist*. It would be illogical to
 15 claim that while *castles* is a non-bounded recurring temporal picture, *the tourist*
 16 is a physical entity with unknown parameters. Why unknown? Because if *the*
 17 *tourist* is regarded as a temporal entity, its content is clear: a fleeting thing
 18 engaging in castle-visits. But if *the tourist* is a physical entity, some questions
 19 arise: what does *the tourist* consist of? The “material substrate” of *the tourist*?
 20 If yes, when, in what time interval? Does the “material substrate” cover the
 21 lifetime of the tourist, up to the moment of utterance? And if *the tourist* in *The*
 22 *tourist visited castles* is something physical, how does it look like? Obviously
 23 such questions about the “material essence” of *the tourist* are impossible to
 24 answer on the basis of the sentence *The tourist visited castles*. Furthermore,

1 even if the observer/speaker has more information about the “material status”
 2 of *the tourist*, the hearer, receiving *The tourist visited castles*, does not obtain it
 3 – the sentence provides to the hearer no information about *the tourist* as a
 4 physical thing. Whereas concerning the temporal status of *the tourist* the
 5 hearer’s knowledge is adequate and fully sufficient for the purposes of
 6 communication. The entity *the tourist* is temporal, with features inseparably
 7 linked to the features of the referent of the verb *visited* and of the participant
 8 *castles*.

9 Put otherwise, *The tourist visited castles* is a sentence portraying a tiny
 10 stage of the individual “the tourist”,¹² namely, one engaged in visiting castles.
 11 And if someone asks how the individual behind the expression *the tourist* must
 12 be depicted, i.e., not within the confines of *The tourist visited castles*, the
 13 answer is easy. A longer passage or a short story about the tourist, describing
 14 this entity in more detail, will be a description of the individual “the tourist”,
 15 including aspects of its physical appearance.¹³

16 But even now there remains a crucial question. Precisely how does it
 17 happen in cognitive and structural language terms that *the tourist* in *The tourist*
 18 *visited castles* acquires a temporal status? Note that the explication of temporal
 19 features by nominals such as *the tourist* and *castles* above mirrors the
 20 denotation of temporal features by abstract nouns such as *a grin*, *a deal*, *a fall*,
 21 *a party*, on the one hand, and *love*, *beauty*, *ineptitude*, *pride*, on the other.
 22 Detailed explanations of these two groups can be found in Author (2000). Note

¹² The individual-stage distinction goes back in linguistics to Carlson (1977) and Quine (1960).

¹³ On the necessity for a television/video representation for a description of the situation, including the temporal status of participants in such sentences, and actually in all kinds of sentences, see Author (2000; 2019).

1 the general rule in English for bounded nouns (*a grin, a deal, a fall, a party*) to
 2 be accompanied by an indefinite article, and for non-bounded nouns (*love,*
 3 *beauty, ineptitude, pride*) not to be accompanied by an indefinite article. Why
 4 is a castle-visit, represented by *a castle* in (5a), bounded at its ends, whereas
 5 *love* is non-bounded? Because, as we know from everyday experience, a visit
 6 to a castle is something that begins at a particular moment in time (entering the
 7 castle gates) and ends at another particular moment (leaving the castle gates),
 8 whereas love is something that has no definite initial point and no definite
 9 endpoint. In even simpler terms: we do not know and cannot say exactly when
 10 we started loving something or somebody; nor do we know when we stopped
 11 loving something or somebody. And it is here that an adequate explanation of
 12 the perfectivity of *visit a castle* and *have a party*, on the one hand, and of the
 13 imperfectivity of *visit castles* and *have pride*, on the other hand, can be given.
 14 First, in a linguistic analysis all nominals can, and must, be treated as temporal
 15 entities at the sentence level – whether they otherwise, as lexical entries, denote
 16 material objects (*castle, castles*) or situations (*party, love*). Second, observe
 17 how clearly the indefinite article signifies temporal boundedness (*a grin, a*
 18 *deal, a fall, a party*), while the zero article signifies temporal non-boundedness
 19 (*love, beauty, ineptitude, pride*); see Author (2000) for tons of detail. And
 20 against the background of such crystal-clear facts, there are linguists today who
 21 question the function of the article to mark temporal boundedness (see below)!
 22 But the temporality of participants in situations such as people and similar
 23 “material objects”, that could be expected to turn into a theoretical issue, is not
 24 an issue in an appropriate temporal model of CA. What is more, it allows a

1 sweeping generalization: **all participants in situations are temporal entities**
 2 **– not only in all sentences in English but in all sentences in all languages!**

3 If the referents of nominals and verbs in English sentences like those
 4 above are temporal entities, they will, consequently, be temporal entities *in any*
 5 *language*. However, the structural specifics of each particular language must
 6 be taken into account when describing the mapping of temporal features
 7 between sentence elements: whether the language features CA or VA, whether
 8 it has articles or verbal aspect, etc. (see participants as temporal entities in
 9 Slavic in Author 2000: 155ff, 300). Regrettably, this extremely important
 10 aspect of CA theory, temporality of participants, remains today systematically
 11 sidestepped by aspectologists, with some exceptions (Bulatović (2013; 2016; to
 12 appear). But the mass turning of blind eyes to an important aspect of a theory is
 13 actually a reassuring development – for it can be argued that if a major element
 14 in a theory has not been seriously contested for two decades after being
 15 reported by a major scientific publisher, it must be considered valid (until, if
 16 ever, proven otherwise).

17

18

19 **On the Mechanism of Mapping Temporal Values in the Sentence – from**
 20 **Nominal Components onto the Verb, or Vice Versa**

21

22 The two sections above provided arguments related to the necessity to
 23 view participants in situations as temporal entities, something based in
 24 cognition. Let us continue the discussion of the temporality of participants,

1 now considering the mechanism of mapping as also related to language
 2 structure. It was established that *castles* in (5b) is a temporal entity that is non-
 3 bounded and indefinitely iterative, and that these features arise thanks to the
 4 zero article and the plurality marker. Note that it is precisely the non-bounded
 5 and indefinitely recurring entity *castles* that initially explicates the
 6 imperfectivity in the sentence. But precisely how is imperfectivity maintained
 7 until the final imperfective reading obtains? Clearly, a sentence beginning with
 8 *The tourist visited* is neither perfective nor imperfective, but can easily end up
 9 perfective by having a bounded object as in *The tourist visited a/the*
 10 *castle/some/two/many castles*. *The tourist visited castles*, however, ends with
 11 the temporally non-bounded entity *castles*. What happens then is that *castles*
 12 maps its non-boundedness in the form of indefinite iterativity back onto the
 13 referent of the verb *visited*, making the latter non-bounded and indefinitely
 14 iterative (cf. diagrammatic representations of mapping in Author 2000). Note
 15 that while the perfectivity of *The/a tourist visited the/a castle* develops
 16 gradually and is maintained relatively smoothly from the beginning to the end
 17 of the sentence, the imperfective *The tourist visited castles* starts with the
 18 aspectually ambiguous phrase *The tourist visited* and with *the tourist* seemingly
 19 bounded, through an article. After the addition of *castles* the ambiguous phrase
 20 *The tourist visited* is re-interpreted as imperfective. To a person non-versed in
 21 CA this may seem strange, though not yet bizarre. What happens next already
 22 borders on the bizarre, and is at the same time very interesting, as it underlies
 23 the fundamental structure of CA. The analysis of the imperfective sentence *The*
 24 *tourist visited castles* cannot stop with the assertion that *castles* imparts a non-

1 bounded (indefinite iterativity) reading on *visited* and on the VP *visited castles*.
 2 If a major CA assumption, to which I subscribe, Verkuyl's, is that all nominals
 3 (arguments) take part in the explication of the final aspectual value of a
 4 sentence, it is absolutely necessary to define also the role of the participant *the*
 5 *tourist* and see exactly how its final temporal constitution arises.

6 The analysis started with the assumption that to be able to utter *The tourist*
 7 *visited castles* the speaker must have perceived recurring castle-visits by a
 8 tourist. And if the sentence is about recurring castle-visits by *the tourist*, *the*
 9 *tourist* is a temporal entity, consisting of a time series of stages of the
 10 individual "the tourist", coinciding with the castle-visits. In other words, *the*
 11 *tourist* in *The tourist visited castles* is an entity with a temporal status ***exactly***
 12 ***equivalent*** to the temporal status of *castles*. But this non-bounded temporal
 13 status of *the tourist* does not materialize out of thin air, especially taking into
 14 account that it contains an article, hence it ought to explicate boundedness. The
 15 final temporal status of the entity *the tourist*, viz., non-bounded iterativity, is
 16 ***forced (mapped) on it, despite the article!*** Initially by the participant *castles*,
 17 and then by the VP *visited castles*. Cognitive science may for the time being
 18 know very little about what happens in speakers'/hearers' heads when
 19 sentences like these are interpreted, but there can hardly be any doubt that the
 20 mapping described above does take place in the brain!

21 With the explanation above, now it can easily be assumed that *the tourist*
 22 is an unidentifiable number of tourist stages in the vision and mind of the
 23 speaker uttering *The tourist visited castles*. The assumption makes sense in
 24 everyday terms too. For the speaker of *The tourist visited castles* to be able to

1 utter this sentence truthfully, s/he has to have observed not only an
 2 unidentifiable number of castle-visits but also such castle-visits that precisely
 3 *the tourist* executed. The explanation is also valid with respect to the structural
 4 language terms in which *the tourist* becomes a non-bounded, indefinitely
 5 recurring entity in *The tourist visited castles*.¹⁴ This happens thanks to the
 6 plurality and non-boundedness of *castles* – mapped back onto the referent of
 7 the verb *visited* and the whole VP *visited castles*, and then, further back, onto
 8 the referent of *the tourist* (see Author 2000: 123-151; 2019).

9 As a synopsis, underlying the above model of CA is the idea that,
 10 understood semantically as a distinction between perfectivity and
 11 imperfectivity, in functional terms **compositional aspect actually represents**
 12 **an all-pervading and perpetual process of mapping temporal features**
 13 **between elements of the sentence, especially between referents of verbs**
 14 **and nominals** – and also, partly, in the context (but this issue is not explored
 15 here). The possibilities for mapping temporal features between verbs and
 16 nominals are described exhaustively in Author (2000, also using diagrammatic
 17 representations) and in Author (2019). Finally, as already argued, there is no
 18 reason not to assume that the mapping of temporal features between verbs and
 19 nominals in the sentence/clause (plus some other elements, mainly adverbial) is
 20 **a universal phenomenon**, valid for all languages. As for exactly how mapping
 21 of aspectual values from verbs onto nominals in VA systems works, e.g., in
 22 Slavic, and exactly what consequences it brings about, this is an issue in need
 23 of future research.

¹⁴ Of course, indefinitely recurring does not mean recurring forever but recurring an unknown number of times.

1

2

3 **The Failure to Recognize the Two Different Types of Aspect: CA and VA**

4

5 The assumption that Verkuyl's CA theory, characteristic of languages like
 6 Dutch and English, could be applied to languages with VA may not be
 7 especially popular in aspectology, but it is not an exotic one either. Attempts at
 8 directly applying CA to Slavic have been made by Borer (2005) and Borik
 9 (2006), among others. This is done on the basis of their obvious, but tacit,
 10 assumption that CA ought to work in Slavic too. Borer (2005: 124, 187) writes
 11 that there are languages that mark perfectivity directly on the verb, i.e.,
 12 boundedness in Slavic is "assigned range directly" (Borer 2005: 344) – and this
 13 gives rise to "the violability of Verkuyl's generalization" (Borer 2005: 345).
 14 Put otherwise, Verkuyl's theory may generally hold for languages like English,
 15 but not for Slavic.

16 Structurally Germanic and Slavic languages differ essentially in that while
 17 most Germanic languages feature a regular pattern of a definite and an
 18 indefinite article and lack VA, all Slavic languages feature VA and lack articles
 19 (some Slavic languages have a definite article but no indefinite). Borer (2005:
 20 156) fails to recognize this essential difference between Germanic and Slavic
 21 in terms of what articles and their absence can do, something explained years
 22 earlier on the basis of the thesis that aspect takes two separate forms, CA and
 23 VA (Author 2000). The failure to recognize the two distinct types of aspect and

1 the mixing up of the two phenomena leads to an impasse, with no space left for
2 valid generalizations on aspect.

3 Similarly Borik (2006), treating perfectivity in English as configured in the
4 VP instead of at the sentence level, provides examples from Russian showing
5 that “a direct internal argument of some perfective verbs can receive a generic
6 interpretation”, i.e., Verkuyl’s ‘unspecified quantity of X’ (Borik 2006: 91).
7 CA theory cannot make valid predictions about Russian if it ignores the fact
8 that Russian manifests VA, not CA. Like Borer, Borik argues that Verkuyl
9 needs a value in the direct argument to obtain perfectivity. Hence, when
10 perfectivity is available in the verb, as in Russian, it ought to induce ‘specified
11 quantity of X’ in the argument. But it does not, says Borik, as in sentences like
12 *Petja razdelil ljudej na dobryx i zlyx* ‘Petja divided people into kind and mean’
13 the verb *razdelil* ‘divided’ is perfective but the argument *ljudej* ‘people’ is
14 generic, i.e., non-quantified (Borik 2006: 92). And as the association of a
15 perfective verb with a non-quantified argument is not envisioned in Verkuyl’s
16 perfective schema, the schema, according to Borik, is defective.

17 It is worth asking: could Verkuyl not have made his perfective schema
18 compatible with Slavic data? The answer is: not really. His concern up to 1972
19 was the explanation of how aspect is realized in languages like Dutch and
20 English – given that it was clear then how aspect is realized in Slavic: as VA.
21 This means that from the very discovery of CA in 1972 it was fully evident that
22 CA represents *another type of aspect*, different from VA – something
23 sidestepped by Borer and Borik. As for how CA and VA relate to each other,

1 this is explained in Author (2000: 123-161), years prior to Borer and Borik's
2 publications.

3 Thus Borer and Borik illegitimately apply Verkuyl's CA theory to
4 Russian, a language that features VA (not CA) and is radically different from
5 English and Dutch – the languages for which CA was architected. Indeed,
6 Verkuyl himself had also thought that his theory is applicable to all languages,
7 including Slavic. However, aware of the distinction between CA and VA made
8 in Author (2000) – see Verkuyl's (2001) large review of Author (2000) – he
9 never produced convincing data and arguments that CA is universal “as is”,
10 without drawing a distinction between CA and VA and without pinpointing the
11 specifics of VA. As for Borer and Borik, they assign to Verkuyl's theory a
12 defect, namely, inapplicability to languages with VA and without articles – that
13 is actually a defect of their own approach and consists in the failure to
14 distinguish between CA and VA systems. The wrong assumption that CA is
15 directly applicable to all languages led to the wrong conclusion that Verkuyl's
16 theory is defective or with an insufficient explanatory power. Verkuyl's theory
17 is a gigantic breakthrough in linguistics and its explanatory power is enormous.
18 But it needs to be complemented by a correct conceptualization of CA as a
19 mirror image of VA, the mechanism of mapping temporal values between
20 referents of verbs and nominals, and the inverse dependence between markers
21 of boundedness in verbs and nouns across languages.¹⁵

22

23

¹⁵ See the inverse dependence between markers of boundedness in verbs and nouns in Author (2000: 153-161).

1 **Mass Failure No 1 in CA Theory: Assumption of an Atemporal Approach**

2 **Instead of a Temporal**

3

4 My approach, treating all referents of participants as temporal (see above,
5 also Author 2000; 2019) easily overcomes the impasse inherent in atemporal
6 approaches (Krifka 1989; 1992; 1998; Filip 2000; 2017, Borer 2005, Borik
7 2006; MacDonald 2012, Fleischhauer&Czardybon 2016). In many publications
8 the atemporal, hence spatial, boundedness of a participant in a situation is
9 purported to be mapped onto the verb, making the verb's aspectual value
10 bounded. Most popular among atemporal approaches is the one exploring the
11 so-called incremental-theme verbs, purported to be "convenient for explaining
12 perfectivity". Incremental-theme verbs are mainly verbs of creation and
13 annihilation (consumption). They are held to acquire perfectivity within VPs
14 thanks to the spatial boundedness of their arguments – created or annihilated.
15 For example, *a fig*, when consumed entirely, as in *The boy ate a fig*, is said to
16 "measure out" the eating of the fig. Let us carefully analyze the reasoning
17 behind the "measuring-out". Exactly how can the spatial boundedness of *a fig*
18 translate into the temporal boundedness/perfectivity of *ate* in *ate a fig*? For
19 some seemingly strange, but actually very clear reason (see below), the
20 participant *the boy* rarely, if ever, draws the attention of the followers of the
21 incremental-theme trend. Their attention is fixed on the object to be consumed,
22 and their reasoning goes like this. The argument *a fig*, being something
23 bounded through the article, transfers its boundedness onto the verb. *A fig* is
24 regarded as a physical object, which means that the boundedness is spatial.

1 And as the boundedness of *a fig* in *The boy ate a fig* is spatial, the explanation,
 2 offered in hundreds of publications on incremental-theme verbs, amounts to a
 3 formulation that the spatial boundedness of objects transforms into the
 4 temporal boundedness of the verb.

5 How can spatial boundedness turn into temporal boundedness? This is ***an***
 6 ***outright mystery*** – that would surely be welcomed in a fairy tale or a fantasy
 7 novel. But its place in linguistic analyses is questionable, to say the least.
 8 Indeed, as was to be expected, at one point a major advocate of the
 9 incremental-theme approach recognized the problem: “Take as an example the
 10 reading of a book; every part of the book corresponds to a part of the reading
 11 and vice versa. With other thematic relations, these properties normally do not
 12 obtain; for example, there is no correspondence between parts of the person
 13 that is reading and the reading event” (Krifka 1992: 44). This is the reason why
 14 the participant *the boy* in sentences like *The boy ate a fig* rarely, if ever, draws
 15 the attention of the advocates of the incremental-theme trend. Because if the
 16 consumption of *a fig* appears to match the physical constitution of the fig, there
 17 is nothing similar that can be said to happen to *the boy* as regards the eating of
 18 the fig. Hence, in order not to compromise the approach with revelations such
 19 as Krifka’s, its supporters were quick in clothing the problem in bizarre jargon.
 20 The miraculous transformation of spatial features into temporal ones was
 21 labeled “homomorphism” (Krifka 1992);¹⁶ “a theory called mereology”,¹⁷ was
 22 harnessed to help explain how spatial features happen to metamorphose into

¹⁶ (Krifka 1992): “consider mapping to events and mapping to objects, the two relations which constitute the core of the construction of the homomorphism from objects to events.”

¹⁷ Mereology (Greek *meros* ‘part’, Ancient Greek *lógos*, ‘word, speech’), dealing with wholes and their parts.

1 temporal ones (Krifka 1998, Filip 2000; 2017). But, of course, the problem will
 2 always, mercilessly, persist: it can be assumed that a part of a book
 3 corresponds to a part of reading it, but it cannot be assumed that parts of a
 4 person reading correspond to the reading – as Krifka honestly admitted.
 5 Whether Krifka noticed the incompatibility between the incremental-theme
 6 approach and Verkuyl’s postulate that the aspect of a sentence is a result of the
 7 impact of all the components, not just of the object on the verb, is unclear. In
 8 any case, the incompatibility, which otherwise simply does not exist in a
 9 temporal model, is a fact.

10 Another problem of the atemporal incremental-theme trend is that its
 11 supporters, struggling to explain perfectivity as described above, turn a blind
 12 eye to the circumstance that incremental-theme verbs are just a very tiny
 13 portion of all verbs in a language capable of explicating perfectivity. As I put it
 14 recently, “it does not matter whether you *draw/eat an apple* or *cut it, throw it,*
 15 *notice it, prefer it* or *forget it*. While only the first two are verbs of
 16 creation/consumption, all the phrases above are perfective (prototypically, not
 17 always), and in a stable theory of aspect it is the perfectivity of all of them that
 18 has to be explained – not just of those with incremental theme verbs” (Author
 19 2018: 967). In my approach to the status of participants in situations, a purely
 20 temporal one (Author 2000; 2019), there is not a trace of a doubt as to how
 21 mapping takes place. It is realized as *a transfer of temporal values* – no matter
 22 whether these are accommodated in nominal or verbal language structure.

23

24

1 **Mass Failure No 2 in CA Theory: Ignoring the Mechanism of Mapping**
 2 **Temporal Values, Coupled to a Misunderstanding of the Function of the**
 3 **Article**

4

5 There are some minor exceptions to the trend of ignoring the mechanism
 6 of mapping temporal values. For example, some peripheral statements in two
 7 publications by Slabakova (1997; 1998) point to temporal features of nominals
 8 and the possibility for a verb to impart “its temporal properties to the object
 9 NP” (Slabakova 1998: 77). The major exception to this trend (to my
 10 knowledge) is Bulatović (2013; 2016; to appear). Her publications show that
 11 she follows a temporal approach, albeit one that needs sophistication. But
 12 although the temporal approach is not popular, it is one that offers a definitive
 13 solution to several of the most fundamental issues in CA theory, as already
 14 demonstrated.

15 As for the hypothesis for a rejection of the mechanism of mapping
 16 temporal values or of the inverse dependence between markers of boundedness
 17 in verbs and nouns, there are two publications (Czardybon&Fleischhauer 2014;
 18 Fleischhauer&Czardybon 2016) challenging my theory of the article-aspect
 19 interplay (Author 2000) and providing some linguistic analysis, though not
 20 relevant to the challenge. There is something to emphasize here, however. My
 21 temporal approach may, indeed, be not very popular, but my theory of the
 22 inverse dependence between markers of boundedness (described below) is not
 23 solitary in aspectology. In the year of publication of my book on CA (Author
 24 2000), Leiss’ conception of the article-aspect interplay also appeared (Leiss

1 2000). According to Leiss, the emergence of the definite article in three Proto-
 2 Germanic languages, Old Icelandic, Gothic and Old High German, is the result
 3 of the gradual loss in these languages of perfective verbs. The two conceptions,
 4 Leiss' and mine, complement each other and could even be regarded as one
 5 theory, establishing an article-aspect interplay: simultaneously synchronic and
 6 diachronic, across millennia and across languages that are very different
 7 grammatically.

8 Both Leiss' conception and my idea of the article functioning as a
 9 grammatical entity marking temporal boundedness on nominals (and hence
 10 perfectivity after the effectuation of the mapping mechanism) are rejected by
 11 Fleischhauer, Czardybon (2016). The authors' argumentation? It equals nil.
 12 They offer *no argumentation*, evading the scientific burden of proof (Author
 13 2018). Furthermore, strangely, their rejection of the aspectual function of a
 14 determiner is directed solely towards the definite article. Similar peculiar
 15 reasoning, divorcing the definite article from the indefinite one, is offered by
 16 Młynarczyk (2004: 69). Indeed, in a footnote in a previous publication
 17 Czardybon, Fleischhauer (2014: 392) mention the indefinite article as a
 18 quantization device, but insist that quantization is not enough to guarantee
 19 perfectivity. Why do they think quantization is not enough to guarantee
 20 perfectivity – or, in their phraseology, “is not enough to yield a telic
 21 predication”? Their answer: the definite article is not sufficient to yield a telic
 22 predication because “it is also compatible with an atelic predication”, as in *She*
 23 *ate the sandwich in/for five minutes* (Czardybon, Fleischhauer 2014: 392).

1 First, as these gentlemen insist that sentences such as *She ate the sandwich*
 2 or *Peter ate the apples in ten minutes* are perfective, or, in their phraseology,
 3 “express a telic predication due to the referential properties of the incremental
 4 theme argument” (Czardybon, Fleischhauer 2014: 379), the following question
 5 begs to be put forward to them. Since *She ate the sandwich* and *Peter ate the*
 6 *apples* are equivalent to sequences such as *The/A woman ate the sandwich* and
 7 *The man/A man ate the apples*, what exactly is it in sequences or sentences like
 8 these that guarantees the explication of perfectivity? The answer is clear, and
 9 consists of two parts: (i) the thing that **cannot** guarantee the explication of
 10 perfectivity is the verb *ate* – because it takes part in both perfective (*The/A*
 11 *woman ate the/a sandwich*) and imperfective sentences (*The/A woman ate*
 12 *sandwiches*); (ii) the thing that **guarantees** the explication of perfectivity in
 13 such sentences **is the article** – be it the definite article or the indefinite one, as
 14 seen in the four possible versions of the sequence *The/A woman ate the/a*
 15 *sandwich*, and as explained in detail above.

16 Second, the two authors’ assertion that “the definite article is not sufficient
 17 to yield a telic predication” implies, and actually requires, that an additional
 18 device be found to “yield a telic predication” in sequences such as *The/A*
 19 *woman ate the/a sandwich*. Let us look for such a language device in one real
 20 sentence, *The woman ate the sandwich*. Recall that Verkuyl’s theory identifies
 21 the telicity of the verb to be a necessary element for triggering perfectivity.
 22 However, what Czardybon, Fleischhauer (2014: 392) have in mind in their
 23 assertion that “the definite article is not sufficient to yield a telic predication” is
 24 obviously **not** the verb *ate*, as their assertion holds precisely for sentences such

1 as *She/The woman ate the sandwich*, i.e., containing the verb *ate*. Hence, if the
 2 definite article and the verb are not sufficient devices for the explication of
 3 perfectivity, what is it in *The woman ate the sandwich* that triggers the
 4 perfectivity? I am afraid that, apart from the lexical meanings of the nominals
 5 *woman* and *sandwich*, there is simply nothing else left to generate perfectivity.
 6 Could the lexical meanings of *woman* and *sandwich* trigger perfectivity? I am
 7 afraid not. Furthermore, it must be heavily emphasized here that the analysis of
 8 *The woman ate the sandwich* is not at all a discussion of a single sentence. It is
 9 a discussion of the properties and functions of a super-gigantic semantico-
 10 syntactic schema, embracing millions of similar sentences and coinciding with
 11 Verkuyl's perfective schema. The schema serves as a nucleus for explicating
 12 perfectivity through two prototypical participants: a bounded agent performing
 13 a bounded action, the action falling onto a bounded object!

14 Third, the two gentlemen's insistence that sentences such as *Peter ate the*
 15 *apples in ten minutes* express "a telic predication due to the referential
 16 properties of the incremental theme argument" reveals that they are unaware of
 17 one of the fundamental tenets in CA theory: aspect is explicated at the level of
 18 the sentence, not at the level of its components. In simpler terms, if *Peter ate*
 19 *the apples* "expresses a telic predication", this is **not** due solely to the
 20 referential properties of the incremental theme argument but is also due to the
 21 subject *Peter* being temporally bounded through a hidden article *the*! This
 22 becomes clear when the subject *Peter* is replaced by *ants*. Cf.: *Ants ate the*
 23 *apples* – this sentence is prototypically imperfective, for reasons explained

1 above (and in Author 2000). It appears that awareness of certain fundamental
2 CA tenets is a requirement a bit too high to meet.

3 In any case, the analysis above demonstrates that not only is Czardybon
4 and Fleischhauer's reasoning deviant, the wrong statement "the definite article
5 is not sufficient to yield a telic predication" re-confirms, even if indirectly, the
6 major thesis, launched 35 years ago (Author 1984a; 1984b) and later
7 sophisticated (Author 2000), that the article – both the definite and the
8 indefinite – in English and similar languages is *a marker of boundedness that*
9 *guarantees the exlication of perfectivity* through the mechanism of mapping
10 temporal values between referents of nominals and verbs.¹⁸

13 **On the Markers of Boundedness in Verbs and Nouns**

14
15 According to Abraham and Leiss (2012: 326), "the first researcher to note
16 that languages develop either a category of aspect or an article system was the
17 Bulgarian linguist Author (1984; 2000)". Indeed, as already claimed, one of my
18 most essential conjectures within CA theory is that there exists an inverse
19 relationship across languages between markers of temporal boundedness in
20 verbs and nouns. If a language lacks markers of temporal boundedness in
21 verbs, they are found in nouns; and vice versa, if a language lacks markers of

¹⁸ A recent paper rejecting the aspectual function of the article, using an exclamation mark as its only "argument" and offering the revelation that a theory of aspect is simply impossible, is Pátrovics (2017). Its form of evading the burden of proof is drastic. Instead of an analysis of at least a single sentence, the author offers free reasoning accompanied by a philologist's understanding of theoretical physics.

1 temporal boundedness in nouns, they are found in verbs. I outlined this
2 interdependence in Author (1984a; 1984b) and later developed and
3 sophisticated it (Author 2000). The markers of temporal boundedness in verbs
4 are prototypically represented by the perfective aspect, as in Slavic. The
5 markers of temporal boundedness in nouns are prototypically represented by
6 the definite and the indefinite article, as in English and other modern Germanic
7 languages. In languages like Finnish the markers of temporal boundedness are
8 also located in nouns, but these markers are not articles. The encoding of
9 temporal boundedness in Finnish is executed by the nominative and the
10 accusative case. The marker of temporal non-boundedness in languages like
11 English is the zero article; in languages like Finnish it is the partitive case.
12 There are hybrid languages too, manifesting a mixture of markers of
13 boundedness and non-boundedness in verbs and nouns. Among these
14 languages are Bulgarian and Greek – featuring simultaneously perfective
15 aspect in verbs and a definite article, but no indefinite article. The theory of the
16 inverse relationship across languages between markers of temporal
17 boundedness in verbs and nouns complements Leiss' (2000) theory of the link
18 between the disappearance of perfectivity in the verb and the appearance of a
19 definite article in Proto-Germanic.

20 Three decades after the revolutionary discovery of CA, in a review of
21 Author (2000), Verkuyl (2001) argued that “we are at the beginning rather than
22 in the final stage of theory formation about tense and aspect”. The mass failure
23 of researchers to recognize not only the mechanism of mapping temporal
24 values, to which Verkuyl (2001) does not subscribe, but also some of the

1 fundamental tenets of his own model – for example, that aspect is explicated at
 2 the level of the whole sentence, appears to lend credibility to his 2001 position
 3 and to suggest that it might, unfortunately, be valid even today. I do not share
 4 such an opinion. The fact that there are publications leading CA theory astray,
 5 no matter what percentage of all writings they are, cannot weaken or damage it.

6

7

8 **Prospects for the Development of CA**

9

10 Apart from some efforts described above to challenge Leiss' (2000) and
 11 Author's (2000) theory of the aspect-article interplay, there have been, to the
 12 best of my knowledge, no other attempts at refuting it within the two decades
 13 after its publication separately by the two authors. It is a pity, however, that
 14 Leiss' (2000) extremely insightful theory of the rise of the definite article in
 15 parallel with the demise of verbal aspect in Old Germanic remains ignored by
 16 specialists in Proto-Germanic. A brand-new large study specifically devoted to
 17 article emergence in Old English only mentions in a footnote Leiss' work and
 18 the possibility for the emergence of articles in Germanic to be due to the loss of
 19 aspect (Sommerer 2018: 47). Given that Leiss' theory handles the heart of the
 20 matter, it would have been natural for Sommerer to analyze Leiss' theory and
 21 to endorse or reject it. She sidesteps it instead – probably for being unable to
 22 understand and interpret it. On the other hand, the absence of proof that Leiss
 23 and Author's theory of the aspect-article interplay is wrong – for almost twenty
 24 years already, constitutes support for its viability. Two decades is more than a

1 sufficient period for critics and disbelievers to find contradicting data,
2 formulate the necessary argumentation and refute a theory.

3 The heuristic potential of CA, including the theory of the inverse
4 dependence of markers of boundedness and Leiss' theory of the emergence of
5 articles in Germanic as a result of the loss of aspect were recently put to the test
6 by myself, in a study of aspect in Old English (Author 2019). Among the
7 conclusions is that: "from the point of view of the continuum between VA
8 languages and CA languages, where Proto-Indo-European and Slavic occupy
9 one end (VA), and most modern Germanic language (English, German, Dutch,
10 etc.) occupy the opposite end (CA), Old English is a very interesting hybrid
11 language with its remnants of VA and at the same time a CA system featuring
12 no definite article in one stage, and a gradual emergence of a definite article
13 (and later an indefinite one) in following stages." Thus, provided these
14 conclusions are correct, of course, the theory of CA with the inverse
15 dependence of markers of boundedness and Leiss' aspect-article diachronic
16 link proves capable of providing a description of an extinct language, Old
17 English, with a grammatical system completely different from Modern English.

18 Another area for future applications of CA theory is grammar, with the
19 complete absence of CA in English comprehensive grammars – a defect that
20 remained unnoticed for decades (but see Schüller 2005).¹⁹ The first publication
21 that raised serious criticism against the treatment of aspect in English
22 grammars and voiced the need for them to include the principles of CA is
23 Bulatović (2013). As shown by the author in a review of my grammar (Author

¹⁹ Huddleston and Pullum's (2002: 118-125) solitary recognition that the perfective/imperfective contrast exists in English is a ray of hope.

2017), its focus is CA, which makes it the first English grammar published in English to use CA theory in the description of English (Bulatović 2018). Bulatović has also authored a review article of several English grammars, voicing again the appeal for grammars to include CA (Bulatović, to appear), as well as a paper in which tests delivered to her students show that the application of CA theory to English language teaching can bear fruit. She argues that English learners whose native tongues lack articles and feature VA will benefit from getting acquainted with at least the basics of CA (Bulatović, unpublished manuscript***). In my opinion, Bulatović's publications actually confirm that CA is such a significant phenomenon in English and similar languages that not only their learners but also teachers and educated native speakers will profit a lot from acquiring knowledge of it.

Conclusion

CA theory, born five decades ago, is not dead! CA theory is not a thing of the past! On the contrary, it is developing – with the inevitable vicissitudes and issues – and has a lot more to offer. But it should appropriately deal with the trends leading to dead ends and be enriched by novel ideas and approaches. Possible directions of future research? The heuristic potential and the explanatory power of the theory of the inverse dependence of markers of boundedness in verbs and nouns, with the underlying conception of the temporal nature of all participants in situations, could be applied to any natural

1 language: living or extinct, located anywhere on the planet, comprehensively
2 studied or not, related or non-related to the languages that are already well-
3 known. The mechanism of mapping temporal values between nominals and
4 verbs in the sentence could also be applied to languages with VA systems to
5 see exactly how verbs map their temporal properties onto nominals and what
6 effects this brings into the semantics of sentences and the general grammatical
7 and lexical structure of the relevant language. The CA system itself, as we
8 know it today predominantly on English and Dutch data, can, and must, be
9 extensively analyzed on data from other Germanic languages as well – to see
10 exactly how these languages differ from English and Dutch.

11 The fascinating theory of CA is expecting new explorers: insightful and
12 enthusiastic!

13

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