Appendix to "The development of the Imperfect in Ancient Greek from simple past to imperfective as a blocking phenomenon": On the readings and their philological and typological bases

This appendix is divided into three sections, corresponding to the three stages into which I have divided the Ancient Greek language in order to track its verbal usage over time. In the first section (Homeric/Archaic), I give brief accounts of each reading, with discussion of its formal semantic properties and accompanying references to relevant literature in the fields of formal semantics and typology. I also provide references to the Greek grammatical literature, where the reader can find richer discussion for each reading and further examples from the texts than I have space here to provide. Each reading in Section A.1 has at least one textual citation. This serves a double purpose: first, to exemplify for the reader precisely what is meant by each reading label and, second, to provide specific evidence of each reading's attestation within the Archaic stage of the language. The readings are numbered and grouped by category (stative, resultative, etc.), within which the reading's manifestations in each of the three functional categories under investigation are treated individually where applicable (e.g., "resultative Aorist," "resultative Imperfect," "resultative Perfect/Pluperfect"), marked off by bullet points.

For the Classical and post-Classical stages, my treatment is less detailed. This is not for lack of thoroughness in my research of these readings, for which the same rigor has been applied as for the Archaic stage, but because: (1) there would be a great deal of redundancy in discussing the semantics of each reading again, (2) the textual citations from the first section (Archaic Greek) serve to exemplify the reading for the reader, whereas subsequent citations from Classical and post-Classical texts would serve only to verify that a reading is actually attested at the stage I claim it is, for which purpose (3) references to the various handbooks on Classical and post-Classical Greek are generally quite sufficient, there being typically very thorough treatments therein, with numerous citations from the primary texts. Therefore, I omit discussion of and references to formal semantics and typology in the sections on Classical and post-Classical Greek, except to refer to what has already been said previously above, and I limit textual citations to those deemed especially enlightening or necessary—there being, on occasion, inadequate treatment of certain readings in the standard handbooks. Still, for every reading at all three stages I provide references to the standard handbooks or other resources where the reader can find (additional) textual citations of the usage under discussion at the stage to which I attribute it. My approach has sought to maximize informativeness (examples and discussion) and transparency (citations of primary and secondary literature) without sacrificing brevity beyond necessity.

Throughout the appendix I use the word *above* in reference to the sections and examples of the main paper (e.g., "cf. §6.1.1 above"). This should be understood simply as a convenient shorthand to refer the reader to the text of the published paper, even though it is not really located "above" the appendix. Of course, the words *above* and *below* are used for cross-references internal to the appendix as well.

A.1 Readings of Archaic Greek (Table 8)

A.1.1 STATIVE READINGS:

Readings presented here have in common that they express states that are ongoing at assertion or evaluation time. They may be built to state verbs or, in the Perfect, derive states from events. These states may be ongoing in either the past ($t_A \prec t_S$) or the present ($t_A \supseteq t_S$) and may be either "attained" (i.e., expressing the ongoing result state of an implied event) or "continuous" (no result state), as discussed below and in Section 5.1 above.

- Stative Aorist: This label describes the use of the Aorist built to state predicates to characterize

states as ongoing either in the past or in the present of speech time, such that the runtime of the state includes speech time or local evaluation time ($t_E \supseteq t_0$, as permitted by the expression $t_E \preceq t_0$ in (17) above). The stative reading here referred to is treated in the semantic literature as a use of the *perfect* aspect (Kiparsky 2002: 113, 120–121), rather than perfective, as seen in the English periphrastic *'ve got* (e.g., *I've got something to tell you*). Its existence in Homer provides some of the evidence on whose basis I assume that the Homeric Aorist was not yet fully grammaticalized as a perfective gram but is more accurately referred to as an "*emergent* perfective" (cf. §6.1.1 above). The past stative use of the Aorist, unlike the complexive reading, refers to states that are *ongoing* at an evaluation time shifted into the past (though the state may implicitly no longer hold at the time of utterance).

An example for Homer has already been given in (6) above (cf. also *Il.* 5.423, 13.430, and *Od.* 8.481). Similar to ἐφίλησα 'loves' is the Aor. ἤχθηρε 'hates', which occasionally occurs with adverbs like ἤδη 'already' to mean 'already hates' (*Il.* 20.306). Other verbs of hating behave similarly (e.g., *Il.* 14.95=17.173: νῦν δέ. . . ὠνοσάμην 'But now I hold in scorn'). As Chantraine (1953 [2015]: 214) discusses, another example is the Aor. ἔπλετο, which in Homer is frequently presential (e.g., *Il.* 1.418), meaning simply 'is/are' (like ἔφυ in Attic), though it can be past referring as well (e.g., *Il.* 12.11: ἔπλεν 'was'). Note that it is often perverse to read ἔπλετο as referring to a change of state 'became/has come to be', as many have sought to explain it, where no change of state exists (as, e.g., at *Il.* 6.434). Another example of a stative Aorist is ἀλλοῖός. . . φάνης νέον ἠὲ πάροιθεν 'you look different now than before' (*Od.* 16.181). For discussion and further Homeric examples see Lloyd 1999: 44, n.72 and Chantraine 1953 [2015]: 214, though the stative usage I refer to strictly excludes some of the resultative or inceptive examples these authors cite.

Examples of the stative use of the Aorist with *past* reference include: ἐφίλησα to mean 'loved' (e.g., *Il.* 9.481, *Od.* 8.63); πόθεσαν 'they missed (him)' (e.g., *Il.* 15.219); in the negative, οὐδ᾽ ἄρ᾽ ἔτ᾽ ἄλλα δυνήσατο 'but he was still not able' (*Il.* 5.621=13.510), οὐδ᾽ ἄρ᾽ ἔτ᾽ ἔτλη 'could no longer endure' (e.g., *Il.* 20.421), and οὐκ ἐθέλησα 'I didn't want (to fight)' (*Od.* 13.341). See Hollenbaugh 2018: 44 for other possible examples.

This use seems to survive at least into archaic lyric poetry (e.g., Theog. 67, though here ἐφίλησαν could mean 'they have come to love') and probably into Attic drama (cf. §A.2.1 below). However, the use is moribund already in Homer and seems vestigial in Attic drama, being highly lexically restricted (mostly to verbs of loving or hating). The only stative Aorist that long endures after Attic drama is ἔφυ in the lexicalized meaning 'be (by nature)' (post-Homeric, cf. above on Homeric ἔπλετο).

- Continuous-state Imperfect: This describes the use of the Imperfect to characterize states as ongoing in the past (a common use of imperfectives and simple pasts cross-linguistically). It is restricted to state predicates (contrast the Perfect), which will accordingly always be of the "continuous" variety (cf. n.20 above), such that the runtime of the state properly includes assertion time ($t_E \supset t_A$) (that is, unless some other reading of the Imperfect available to state predicates arises, such as complexive or inceptive). This reading may be thought of as a kind of "progressive" to state verbs (of the type *was standing, was sleeping*, etc.; cf. §A.1.2 below). As such, it may co-occur alongside a progressive Imperfect, as in (A1), where the Imperfect to a state predicate ἔζωον 'were living/alive' and to an event (activity) predicate ἐμάχοντο 'were fighting' both convey something ongoing in the past (as evinced by ἔτι 'still').

(A1) CONTINUOUS-STATE IMPERFECT IN HOMER

ὅσσοι ἔτ᾽ **ἔζωον** περί τε ψυχέων ἐμάχοντο·
τοὺς δ᾽ ἤδη ἐδάμασσε βιὸς καὶ ταρφέες ἰοί (*Od.* 22.245–246).

'As many (wooers) as **were** still **living/alive** and fighting for their lives
while the bow and flurry of arrows had already overcome the rest'.

For discussion and further examples of this use see, e.g., Chantraine 1953 [2015]: 220–221 and Schwyzer–Debrunner: 276 ("stative Imperfect," citing ἔσκε 'was' for Homer, among others). For a theoretical treatment of this reading of the imperfective aspect (among others) see Deo 2015b.

- Stative Perfect: This describes a Perfect built to any predicate type (except, evidently, agentive activities) to characterize states as ongoing at speech/evaluation time (i.e., in the present). See Wackernagel 1926–1928 [2009]: 215–218 for discussion, as well as Schwyzer–Debrunner: 263–264, 286–287; Gildersleeve & Miller 1900: 99–100; Chantraine 1953 [2015]: 228–229. On the Pluperfect see Chantraine 1953 [2015]: 231; Wackernagel 1926–1928 [2009]: 238; Gildersleeve & Miller 1900: 103; Schwyzer–Debrunner: 287–288. The stative use of the Perfect comes in two main varieties based on the situation type of the predicate. It express what I call "attained states," which are typically built to transformative event verbs (i.e., achievements or accomplishments), of the type τέθνηκε 'is dead' to θνήισκω 'die' (e.g., *Il.* 7.328, 18.12). When combined with a transformative predicate, the Perfect asserts that there is a result state that holds at speech/evaluation time (t_0) and that that result state (in this case BE DEAD) is of the sort that follows from an event of the type denoted by the predicate (in this case DIE). Though this typically assumes a preceding event that has led to the result state expressed by the Perfect, the event itself is not part of the asserted content of a verb in the Perfect (i.e., it is not at issue). This is what distinguishes the stative from the resultative interpretation, which asserts the occurrence of an event of the type denoted by the predicate and only *implicates* that its result state still holds at speech/evaluation time (cf. Mittwoch 2008). When the Perfect morphology combines with a state predicate, on the other hand, there is no implication of a preceding event, since the lexical item does not itself denote an event. These are what I call "continuous states," of the type ἔολπα 'I hope' (e.g., *Il.* 20.186). Given that the Perfect built to non-states outputs stative meaning, it may be said to function as a "stativizer" (i.e., it converts events into states).

A.1.2 PROGRESSIVE-CONATIVE AND INTENSIVE-FREQUENTATIVE READINGS

Readings treated here have in common that they refer to events (not states) that are ongoing at the relevant assertion time, such that the eventuality time properly includes the assertion time ($t_E \supset t_A$), as in the first clause of *I was jogging* (t_E) *when my phone rang* (t_A). The progressive-conative is a basic interpretation available to the imperfective aspect (Comrie 1976: 32–40). See Deo 2020 for discussion and review of the semantic literature. I assume what decides whether any given imperfective occurrence will be interpreted as habitual or progressive/continuous-state to be largely a matter of pragmatics, and the semantics of these readings probably requires more machinery than is, for simplicity's sake, posited here (cf. discussion under Figure 1 above). I assume also the difference between the progressive and continuous-state interpretations to be determined by predicate type (cf. §A.1.1 above)

- Progressive-conative Imperfect: I group the progressive and conative readings of the Imperfect together, since I view the latter as simply a variety of the former (though nothing depends on this assumption). In its progressive use, the Imperfect characterizes an event as ongoing or incomplete in the past (Chantraine 1953 [2015]: 222), as seen above in (2b) and (A1) (cf. also

Il. 18.550–551). The conative variety refers to a specific kind of incomplete action such that the goal or termination of the action has not (yet) been achieved (Chantraine 1953 [2015]: 220–221; Gildersleeve & Miller 1900: 93–94), as shown in (A2) (cf. also (A15b) below).

(A2) CONATIVE IMPERFECT IN HOMER
πορφύρεον δ᾽ ἄρα κῦμα διιπετέος ποταμοῖο
ἵστατ᾽ ἀειρόμενον· **κατὰ** δ᾽ **ἤιρεε** Πηλείωνα (*Il.* 21.326–327).

'And the dark wave of the heaven-fed River
stood towering (over him), and **was seeking to/preparing to overwhelm** the son of Peleus'.

The negative of the conative use often expresses resistance or inability to achieve some goal or begin some process (cf. id.: 95–6, 106). This is similar to what is sometimes termed the "capacity reading" (cf., e.g., Green 2000), except that it can refer to specific occasions rather than generic attributes. I will call it here simply the "ability reading" (cf. below §A.2.2). Examples include: τὸν δ᾽ οὐ κύνες ἀμφεπένοντο 'But the dogs could not set to work on Hector' (despite their wanting to) (*Il.* 23.184); ἀλλ᾽ οὐχ ἥιρει φῶτας 'But he could not catch any man' (despite his trying to) (*Il.* 17.463).

- Intensive-frequentative Perfect: Under this label (also sometimes called "iterative-intensive") is the Perfect with non-stative "presential" interpretation, which often involves some sort of intensive or frequentative action. It is restricted to event predicates. See Wackernagel 1926–1928 [2009]: 215–216 for discussion, as well as Schwyzer–Debrunner: 263–264, 286–287; Gildersleeve & Miller 1900: 100–101; Chantraine 1953 [2015]: 228–229. Many, including Schwyzer–Debrunner (263), view this usage as original to the meaning of the Perfect, from which its stative use derives. The use is most common in Homer (Wackernagel 1926–1928 [2009]: 215) but does continue to be productive later, at least in Attic drama (see §A.2.2 below and cf. Gerö & von Stechow 2003: 271). Examples include: ἀλάληται 'wander about', βέβηκεν 'strides, keeps striding' (according to Wackernagel 1926–1928 [2009]: 216), πεποτήαται 'they flap about', and various noises such as βέβρυχεν 'roars, is/keeps roaring' (e.g., *Od.* 5.412). The Pluperfect of such verbs is simply their past-tense equivalent, as in ἀμφὶ δὲ πέτρη / δεινὸν βεβρύχει 'and the rock would roar/kept roaring terribly all around' (*Od.* 12.241–242).

  I have classed the intensive-frequentative Perfect with the progressive-conative readings for convenience. Strictly speaking, however, this "reading" really refers to a class of Perfects that function essentially as Present stems. Accordingly, their readings are not limited to progressive, but may be habitual (e.g., *Od.* 5.412), pluractional (e.g., *Od.* 12.242), inceptive (e.g., *Od.* 21.354), etc. Further, their synchronic status as "intensive" or "frequentative" in meaning does not necessarily hold in all cases. So, for instance, βέβηκεν/βεβήκει is often used to mean simply 'moves/moved' (as in *Il.* 16.69: Τρώων δὲ πόλις ἐπὶ πᾶσα βέβηκεν 'the whole city of the Trojans is moving [or 'is in motion'] against (them)').

A.1.3 RESULTATIVE READINGS

This use refers to an *event* whose direct effect or outcome (called "result state") continues to hold at the time of speech (or time of local evaluation). In the semantic literature it is regarded as one of the three or four basic readings of perfect aspect (Comrie 1976: 56–58; Kiparsky 2002: 113, 118–120),[63] though it should be noted that, cross-linguistically, perfective grams are also robustly resultative in their usage, such that both perfect and perfective aspect must be compatible with the

63. I.e., along with the experiential, universal, and stative readings. In Hollenbaugh 2018, this cluster of readings is referred

resultative interpretation (cf. Condoravdi & Deo 2014). The event referred to in a resultative expression (especially as expressed by the Aorist in Greek) is often located in the recent past relative to speech/evaluation time, though this is not a requirement. The recent past interpretation is referred to in the semantic literature as the "hot news" reading of the perfect aspect (since McCawley 1971; cf. Binnick 1991: 99), otherwise called the "recent past" reading (Comrie 1976: 60–61). However, I follow Kiparsky (2002: 120) in assuming that "the recent past reading is a special case of the resultative reading," since virtually all recent past readings are resultative (type *The article has just been published*, with a continuing result state) but not all resultatives are recent (type *She has long since retired*).

As discussed in Section 6.1.1 above, I assume that the resultative interpretation, like all "perfect-like" interpretations, requires that the assertion time include both eventuality time and evaluation time ($t_E \subseteq t_A \wedge t_A \supseteq t_0$) and that eventuality time at least partially precede evaluation time ($t_E \preceq t_0$). When the evaluation time coincides with speech time (t_S), the verb can be said to have "present reference," translatable typically by the English *have*-Perfect in the present. When t_0 is "back-shifted," such that it does not coincide with speech time but precedes it, the assertion time will necessarily precede speech time (but still include the back-shifted evaluation time) in a use called the "counter-sequential" reading (cf. §A.1.7 below). The difference between the resultative and the experiential (§A.1.4) and universal (§A.1.5) readings of the perfect aspect is a much debated topic. I assume that these all reflect the same basic aspectual relation, as just described, and that a mixture of semantic and pragmatic effects, such as predicate type and context, are responsible for the differences. Some support for this view comes from the fact that one and the same predicate can have different perfect readings under different circumstances. Compare the resultative perfect *I have (just) thrown the ball on the roof* (and I can't get it down; result state holds at speech time) versus the experiential *I have thrown the ball on the roof (before)* (so now I know to be more careful; result state does not hold at speech time but "consequent state" does). The difference between the resultative and experiential is thus a matter of whether the result state holds at evaluation time or not, while in the universal reading the eventuality time interval is "stretched" from some point in the past typically all the way to the evaluation time ($t_E \supset t_0$), though this is not strictly required (see discussion below, §A.1.5).

- Resultative Aorist: The resultative use of the Aorist is quite common at all stages of Greek (Schwyzer–Debrunner: 281–282 "confective") but nowhere more so than in Homer, as has been argued extensively above (§5.4). It often refers to the result of a recent past event and frequently co-occurs with adverbials meaning 'now' (e.g., νῦν 'now', ἤδη 'already, (by) now'), 'just now' (e.g., ἄρτι 'just, now, presently'), or 'again' (αὖ), though this is not a requirement (Wackernagel 1926–1928 [2009]: 227; as, e.g., ἐβόησας 'have you [just] cried out' *Od.* 9.403–404). For discussion of this reading in the Greek grammatical literature, with further examples, see Hollenbaugh 2018: 40–49; Chantraine 1953 [2015]: 214; Wackernagel 1926–1928 [2009]: 227; Delbrück 1879: 107–108, 1897: 280–281. I provide an example of a resultative Aorist with present reference in (A3).

  (A3) RESULTATIVE AORIST IN HOMER
  νῦν μὲν γὰρ Μενέλαος **ἐνίκησεν** σὺν Ἀθήνηι (*Il.* 3.439).

  'This time Menelaus **has beaten** me with Athena's help' (ex. and tr. Wackernagel 1926–1928 [2009]: 227).

to collectively under the label "constative." However, this practice is to be abandoned, due in part to the fact that the name "constative" is used elsewhere in the Greek grammatical literature to refer to the so-called "statement-of-fact" or "factive" use of the Aorist (e.g., Purdie 1898).

In contexts in which the assertion time precedes the speech time, as in clauses that depend on a past-referring main verb, the Aorist designates anteriority/counter-sequentiality and, as such, is the most regular means of expressing anteriority at all stages of Greek (cf. §A.1.7 below). A parallel passage containing a single Aorist form (συμφράσσατο) in both the anterior resultative and the plain resultative use is *Il.* 1.537 ('had plotted') and 540 ('has plotted').

- Resultative Imperfect?: The Imperfect does not typically have a resultative function, at least not with present reference, though cf. its counter-sequential use below (§A.1.7), which may be understood in most instances as resultative *in the past* (cf. discussion just above). Some possible cases of the resultative Imperfect with present reference exist, however. Cf. Wackernagel's (1926–1928 [2009]: 224) interpretation of νεόμην at *Od.* 4.585 as 'I have (now) returned home' (cf. Hollenbaugh 2018: 36), though this may be better taken as an inceptive Imperfect ('I set out for home') (cf. Wackernagel 1926–1928 [2009]: 224, n.12). Another possible example of this sort is *Il.* 1.335–336: ἄσσον ἴτ᾽· οὔ τί μοι ὔμμες ἐπαίτιοι, ἀλλ᾽ Ἀγαμέμνων, / ὃ σφῶϊ **προΐει** Βρισηΐδος εἵνεκα κούρης 'Come closer; it is not you who are blameworthy to me, but rather Agamemnon, who **has sent** you **forth** for the girl Briseis'. Given that the result state of Agamemnon's "sending" action still holds at the time of Achilles' quoted speech, it is reasonable to assume that this example represents the resultative reading of the Imperfect with present reference. In addition, the Ipf. ἄκουον means 'have heard of' at *Od.* 3.193 and 18.126, referring to knowledge attained by hearing (cf. Wackernagel 1926–1928 [2009]: 236), though these may be better classed as experiential (see below). Interestingly, this "perfect-like" value of the Imperfect is distinct from that of the Aor. ἄκουσα in its resultative use, which typically refers to hearing something directly, rather than hearing about it, thus 'have heard (a sound or speaker)' (e.g., *Il.* 24.223, and cf. (A5) below). Another possible example is *Od.* 1.234: νῦν δ᾽ ἑτέρως ἐβόλοντο θεοί 'But now the gods have chosen otherwise'. Such readings are, of course, not incompatible with neutral aspect, and I attribute the scarcity of the resultative Imperfect to blocking on the part of the Aorist (cf. §6.2.1 above).

- Resultative Perfect: This refers to the use of the Perfect in a meaning similar to that of the resultative Aorist, to designate not a state but an event (typically in the recent past) whose effects or "result state" still hold at speech/evaluation time. The use is quite rare in Homeric proper (i.e., Homer, Homeric hymns, and Hesiod), where it occurs mostly in dependent clauses in the passive (e.g., *Od.* 22.55–56) and possibly in the active (*Il.* 21.155–156, though this may be better classed as concentrative (cf. §A.1.6 below)). An example in a main clause may be observed for the verb βεβίηκεν 'has overpowered', given in (A4a) (similarly at *Il.* 10.172; cf. Chantraine 1953 [2015]: 230–231). Note that this example cannot be read as stative ('is overwhelmed'), not only judging from its context but because it has a subject that is not an experiencer and an accusative object that is a patient of the action of the verb, whereas statives typically have experiencer *subjects* and take accusative objects that are not patients (such as οἶδα 'know' or ὄπωπα 'see', with an accusative of what is known or seen; cf. id.: 229–230). The resultative use becomes more common beginning in lyric. Sappho (Sapph., c. 600 BCE) has a likely example in a main clause, given in (A4b).

(A4) RESULTATIVE PERFECT IN ARCHAIC GREEK

a. μὴ νεμέσα· τοῖον γὰρ ἄχος **βεβίηκεν** Ἀχαιούς (*Il.* 10.145 = 16.22).

'Don't be offended; for such sorrow **has overwhelmed** the Achaeans'.

b. **δέδυκε** μὲν ἀ σελάννα
καὶ Πληΐαδες, μέσαι δέ

νύκτες (Sapph. *fr.* 168B.1–3).

'The moon **has set**
along with the Pleiades,
and (it is) midnight'.

The Pluperfect can have resultative interpretation from the perspective of the past (Chantraine 1953 [2015]: 231). This amounts to an anterior or "counter-sequential" use (discussed in §A.1.7 below). Yet the line between this and the past stative use of the Pluperfect (cf. §A.1.1 above) is not always clear: cf., e.g., τὸν δ᾽ ἔλιπε ψυχή, κατὰ δ᾽ ὀφθαλμῶν **κέχυτ᾽** ἀχλύς 'and his spirit left him, and down over his eyes a mist **was/had been shed**' (*Il.* 5.696). Examples like this seem even to approach the concentrative-sequential use of the Pluperfect (cf. §A.1.6 below).

A.1.4 Experiential readings

This reading refers to an eventuality whose consequent state holds at speech/evaluation time but not its result state (type *I have been to Paris*). In the semantic literature, the experiential reading is treated as a reading of the perfect aspect (Comrie 1976: 58–59; Kiparsky 2002: 113). It is sometimes called "existential" (McCawley 1971; Gerö & von Stechow 2003). The experiential interpretation is especially compatible with pluractional interpretation cross-linguistically, of the type 'I have often wondered about that' (cf. E. Dahl 2010: 78–79). Cf. §A.1.3 and §6.1.1 above for a discussion of the semantics of this use and how it differs from the other "perfect-like" readings.

- Experiential Aorist: This use of the Aorist typically occurs with adverbs like πολλάκι(ς) 'often', ἤδη 'already', or πω 'yet' (cf. E. Dahl 2010: 78–79, 300–301). For a discussion of the experiential Aorist in Homer, with examples, see Hollenbaugh 2018: 33, 43. On the use in Greek generally see Smyth 1956: 431–433 and Gildersleeve & Miller 1900: 108, 112 ("Empiric(al) Aorist"). I provide an example with present reference in (A5).

  (A5) Experiential Aorist in Homer
  πολλάκι γάρ σεο πατρὸς ἐνὶ μεγάροισιν **ἄκουσα** (*Il.* 1.396).

  'For I **have** often **heard** you in the halls of my father' (cf. similarly *Od.* 14.198).

  An example in the negative is to be found at *Od.* 19.350–351. When the experiential Aorist occurs in past-referring contexts, it is classified as counter-sequential/anterior (type *She knew how to find it because she had been there before*), for which see §A.1.7 below.

- Experiential Imperfect?: This refers to the Imperfect designating a past eventuality whose consequent state holds at speech time (t_S) or a salient reference point in the past (t_0). Compare the Russian past Imperfective in (present) experiential use (Forsyth 1970: 15 (cf. 42)). This use is not uncommon under negation with (relative) *past* time reference, treated under "counter-sequential" (cf. §A.1.7 below). Examples of *present*-referring experiential Imperfects in Homer are scarce but not unattested. *Od.* 16.241 shows a solidly experiential use of the Imperfect: σεῖο μέγα κλέος αἰὲν **ἄκουον** 'I**'ve** always **heard of** your great fame' (contrast the experiential use of the Aorist in (A5) above). Another such example is to be found at *Od.* 19.340–342: ὡς τὸ πάρος περ ἀΰπνους νύκτας **ἴαυον** 'as I**'ve spent** sleepless nights before' (similarly *Od.* 22.462–464; cf. Chantraine 1953 [2015]: 221). Such readings are, of course, not incompatible with neutral aspect, and I attribute the scarcity of the experiential Imperfect to blocking on the part of the Aorist and Perfect (cf. §6.2.1 above).

- Experiential Perfect: Despite Gerö & von Stechow 2003, there are multiple clear experiential

uses of the Perfect already in Homer, as in (A6) (cf. Wackernagel 1926–1928 [2009]: 218–219, 227 and Chantraine 1953 [2015]: 230; another example may be found at *Il.* 1.278).

(A6) EXPERIENTIAL PERFECT IN HOMER
ἦ δὴ μυρί᾽ Ὀδυσσεὺς ἐσθλὰ **ἔοργεν**
βουλάς τ᾽ ἐξάρχων ἀγαθὰς πόλεμόν τε κορύσσων,
νῦν δὲ τόδε μέγ᾽ ἄριστον ἐν Ἀργείοισιν ἔρεξεν (*Il.* 2.272–274).

'Truly Odysseus **has done**$_{[PF.]}$ countless good deeds as leader in good counsel and waging war, but now he has done$_{[AOR.]}$ *this*, the best (thing) by far among the Argives'.

A.1.5 UNIVERSAL READINGS

By *universal* I refer to what is typically called the "universal" reading of the perfect in the semantic literature, of the type 'have been doing/being X (for/since some time)' (cf., e.g., Comrie 1976: 60; Klein 1994: 112–113 "perfect of persistent situation"; McCawley 1971; Binnick 1991: 98–99: called "universal" because its logic involves the universal quantifier "all" (∀)—the event or state extending throughout the entirety of the relevant interval). This refers to some event or state initiated some time ago and continuing up to the present moment (or local evaluation time). Cf. §A.1.3 and §6.1.1 above for a discussion of how this use differs from the other "perfect-like" readings.

I take the universal reading to refer to eventualities that continue up *to* speech time, of the type *I have been working all afternoon (and am finally finished)*, as well as those where the eventuality time continues *through* speech time, of the type *I have been working since noon (and will continue for some time)*. The former type I take to be the realization of the relation $t_E = t_A \wedge t_A \supset t_0$ (i.e., eventuality time is coextensive with assertion time, which in turn includes the speech/evaluation time), which is available under the denotations of perfect, Type 1 perfective, simple past, or Type 2 (present) imperfective grams, and so is possible at the Classical and post-Classical stages of Greek for the Perfect (or Pluperfect with past reference), Aorist, and Present indicative. The latter type of universal reading (i.e., eventuality continues *through* speech time) I take to be the realization of $t_E \supset t_A \wedge t_A \supset t_0$, which is available under the denotation of imperfective aspect in general, whence the use of the Present indicative to express this in the present time (Smyth 1956: 422–423, §1885) and the Imperfect to express it in the past (id.: 424, §1892), though the Imperfect can also occasionally be used to designate a present universal as well (see below). In the Classical language, when the Perfect is used to express universal meaning, the eventuality typically does not continue through speech time (id.: 423) or, in the past, through evaluation time (id.: 424). This is in contrast to the Present, for which the eventuality typically does continue through speech/evaluation time.

Further, the universal reading may refer either to states (as in *I have lived in LA for six years now*) or to events (as in the examples of the preceding paragraph). The universal to state predicates is typically expressed in Greek (particularly post-Homeric) by the Perfect (cf. Gerö & von Stechow 2003: 273–9) and (very marginally) the Aorist, though the Present is also so used. The universal to event predicates continuing to/through the speech time is expressed at all stages of Greek by the Present indicative (of the type πάλαι θαυμάζω 'I have long been wondering'; cf. Smyth 1956: 422–423), and in Homer especially with the adverb πάρος 'formerly, up to now' (Chantraine 1953 [2015]: 221). Yet the Perfect and occasionally the Aorist are also found to event predicates in this use (cf. (A8) and (A12) below). The use is increasingly prevalent among Perfects in the Classical period (cf. §A.2.5 below and Gerö & von Stechow 2003: 274–275).

- [Universal Aorist?]: To state predicates an example or two of the Aorist in Homer may possibly

be considered "universal." In (A7) Antilochus has been held in the favor of Zeus and Poseidon the whole of his young life, up to the present time.

(A7) UNIVERSAL AORIST IN HOMER(?): STATE PREDICATE
Ἀντίλοχ᾽, ἤτοι μέν σε νέον περ ἐόντ᾽ **ἐφίλησαν**
Ζεύς τε Ποσειδάων τε, καὶ ἱπποσύνας ἐδίδαξαν (*Il.* 23.306–307).

'Truly, Antilochus, Zeus and Poseidon **have loved** you, despite your being young and they have taught (you) all sorts of horsemanship'.

It is certainly possible, however, that ἐφίλησαν is better classed with the "stative" Aorist discussed above and translated 'Zeus and Poseidon love you despite your youth'. Another possible but uncertain example is *Od.* 9.513: ἀεί τινα φῶτα. . . **ἐδέγμην**. . . ἐλεύσεσθαι 'I **have(?)** always **expected** that a man would come' (cf. also *Il.* 6.126). Remarkably, Homer may attest the universal use of the Aorist even to event predicates, provided the verb has a multiple-event reading, as in (A8).

(A8) UNIVERSAL AORIST IN HOMER(?): ACHIEVEMENT PREDICATE
ῥεῖα δ᾽ ἀρίγνωτος γόνος ἀνέρος ὧι τε Κρονίων
ὄλβον ἐπικλώσηι γαμέοντί τε γεινομένωι τε,
ὡς νῦν Νέστορι **δῶκε** διαμπερὲς ἤματα πάντα (*Od.* 4.207–209).

'For easily recognizable is the offspring of a man for whom the son of Cronos spins happiness both at marriage and at birth,
as he **has given/been giving** Nestor now continuously all his days'.

Yet it is possible that the adverbials in (A8) refer to the result state rather than to the event itself, as when we say *I went home for the rest of the day* we do not mean that the process of going home lasted all day but that the result state of *being* at home did (cf. n.69 below). If so, the Aorist in (A8) is simply resultative like so many others (cf. similarly *Il.* 1.96). Due to the uncertainty of these examples, I regard the universal use as not securely attested for the Aorist at the Archaic stage (contrast the Present in this use, e.g., at *Il.* 14.269).

- Universal Imperfect: The Imperfect in Homer is attested in a universal perfect value with past reference time, as shown in (A9), where the 'watchman' is still at his post keeping watch at the time of narration ($t_E \supseteq t_A$), and we are told that he has been doing so continuously for an entire year up to this point (when he sees Agamemnon).

(A9) UNIVERSAL IMPERFECT IN HOMER: PAST REFERENCE
τὸν δ᾽ ἄρ᾽ ἀπὸ σκοπιῆς εἶδε σκοπός, ὅν ῥα καθεῖσεν
Αἴγισθος δολόμητις ἄγων, ὑπὸ δ᾽ ἔσχετο μισθόν,
χρυσοῦ δοιὰ τάλαντα· **φύλασσε** δ᾽ ὅ γ᾽ εἰς ἐνιαυτόν,
μή ἑ λάθοι παριών (*Od.* 4.524–527).

'And from his post a watchman saw him, whom
deceitful Aegisthus had taken and stationed there, for he had offered as payment two talents of gold; and he **had been keeping watch** for a year,
lest (Agamemnon) should pass by him unnoticed'.

This reading may be viewed as the past equivalent (counter-sequential) of the Present universal construction mentioned at the beginning of this section (e.g., *Il.* 14.269, 18.386, *Od.* 2.89–90; on the use see Chantraine 1953 [2015]: 221; Smyth 1956: 424, §1892). It may alternatively be viewed as a special case of the progressive use of the Imperfect ('was doing up

until' and so '*had been* doing'). Cf. similarly *Il.* 23.871: ἔχεν πάλαι 'had long been holding'. For further Homeric examples see Gildersleeve & Miller 1900: 98.

Remarkably, the Imperfect can also have *present* reference in its universal perfect use, as shown in (A10)—so interpreted by most translators, since the action continues up to the time of the utterance in quoted speech. Such a use is entirely expected of a simple past tense (cf., e.g., the Middle English Preterite (Fischer 1992: 245)), as it is aspectually neutral ($t_E \circ t_A$), and the relation "$t_A \preceq t_0$" only requires the eventuality time to *partially* precede the evaluation time (see (20) above).

(A10) UNIVERSAL IMPERFECT IN HOMER: PRESENT REFERENCE
ἤτοι ὃ τῆς ἀχέων φρένας **ἔφθιεν** (*Il.* 18.446).

'Truly he **has been consuming** his heart grieving for her'.

- Universal Perfect: This use is rare in the Homeric language. The most likely example is to the state predicate ἀφίστημι 'stand back, keep away' in (A11), where it is coordinated with a Present. It is possible, however, to read πάρος 'formerly, up to now' as scoping only over the participle φέροντες 'bearing' and reading the Perfect and Present as present habitual (so Chantraine 1953 [2015]: 229). Still, given the context, in which a specific group of people is referred to, it seems to me more likely that both represent universal perfects—the Perfect used for the state predicate, the Present for the event predicate (as in Classical Greek).

(A11) UNIVERSAL PERFECT IN HOMER: STATE PREDICATE
ἄλλους δ᾽ ὀτρύνοντες ἐνήσομεν, οἳ τὸ πάρος περ
θυμῷ ἦρα φέροντες **ἀφεστᾶσ᾽**$_{[PF.]}$ οὐδὲ μάχονται$_{[PRES.]}$ (*Il.* 14.131–132).

'But spurring them on we will send the others in (to battle), who, even until now, giving in to their resentment, **have been staying away**$_{[PF.]}$ and have not been fighting$_{[PRES.]}$'.

There are two possible examples of universal Perfects built to event predicates, one of which is given in (A12) (cf. similarly *Il.* 24.765–766). However, these are probably better treated as belonging to the stative use ("attained state"; cf. §A.1.1 above) whose result state is asserted to have obtained for a particular duration (similarly Hes. *WD* 385–386 and, with a Pluperfect, *HH* 3.91–92, though cf. (A22) below and Hollenbaugh 2018: 43). Similar are stative-resultative examples like ἐννέα δὴ **βεβάασι** Διὸς μεγάλου ἐνιαυτοί 'Truly (now) nine years of mighty Zeus **have/are gone by**' (*Il.* 2.134).

(A12) UNIVERSAL PERFECT IN HOMER?: EVENT PREDICATE
ἐννῆμαρ δὴ νεῖκος ἐν ἀθανάτοισιν **ὄρωρεν** (*Il.* 24.107).

'For nine whole days strife **has stirred/been roused** among the immortals'.

A.1.6 CONCENTRATIVE READINGS

Under this label (cf. n.9 above) I refer to readings that involve an eventuality that is fully included in assertion time ($t_E \subset t_A$), which is located in the past ($t_A \prec t_0$). In the semantic literature the reading is typically classed as a function (or *the* function) of the perfective aspect, in which the event is "viewed from without," as a "complete" and "bounded whole," without emphasis on its "internal structure" (cf., e.g., Comrie 1976: 18; Klein 1994: 102–103, 109–110; Smith 1997: 66–69).[64] This is in contrast to readings more typical of imperfective aspect, such as the progressive, in which an

64. Cf. also Wackernagel 1926–1928 [2009]: 225–226 for an insightful discussion of the notion of "completeness" as it relates to past tense and the aspect of the Greek Aorist in particular.

event is "viewed from without," as "incomplete," "unbounded," and with attention to its "internal structure." The concentrative use is found in contexts of sequential narration, of the type *I tripped and fell* (cf. E. Dahl 2010: 78), or when the event is explicitly stated to have held at or within a certain time, of the type *While I was running, my phone* ***rang*** or *I* ***was insulted*** *on that occasion*. The sequential-narrative use is thus a special case of the concentrative reading, and not all functional categories compatible with concentrative interpretations will necessarily be used to sequence events in narration. Further, concentrative is by no means the only reading possible in sequential narration; the inceptive, pluractional, and (occasionally) complexive readings are also used to sequence events chronologically.

- Concentrative-sequential Aorist: This is generally assumed to be the Aorist reading *par excellence* (cf. n.10 above), referring to a single event in its entirety, located at some time in the past, without further elaboration as to the "internal structure" of the event (cf. n.25 above). On the concentrative Aorist in Homeric Greek see most recently Hollenbaugh 2018: 30–31, 33, 44, in addition to Chantraine 1953 [2015]: 213–214 and the standard handbook treatments of Greek syntax more generally (e.g., Schwyzer–Debrunner: 280–281; Wackernagel 1926–1928 [2009]: 224–225, 233–236; Delbrück 1879: 102–106). Examples of this common use of the Aorist in Homer are to be found above in Section 1.1 (1), as well as (24b) in Section 6.3.1 (cf. also *Il.* 1.432–433). Most examples of this reading are to verbs belonging to a transformative situation type (viz. achievement or accomplishment), but activities and stage-level states are also possible (cf. n.18 above), provided that the predicate as a whole is telic (e.g., *Il.* 23.114–119; *Od.* 3.151–152, 3.490, 15.188).

- Concentrative-sequential Imperfect: This use, with examples, is treated above in Section 1.1 (1) and §5.1 (cf. also (24a) in §6.3.1). It refers to the Imperfect in a use very similar (or identical) to that just described for the Aorist. On this use of the Imperfect in Homer (and Ancient Greek in general) see especially Wackernagel 1926–1928 [2009]: 235; Friedrich 1974: 14–16; Schwyzer–Debrunner: 276–277; Kühner–Gerth: 143–144; and the extensive treatment in Hollenbaugh 2018: 28–39, with further examples.

- [Concentrative Perfect?]: This refers to the Perfect tense used in simple "preterital" contexts such that eventuality time is fully included in assertion time ($t_E \subset t_A$), as is more typical of the Aorist and Imperfect just discussed. Such Perfects do not designate present states but, paradoxically, past events. However, the Perfect is not used in sequential narration in Homeric/Archaic Greek (contrast Classical and post-Classical usage below), certain regular lexical exceptions notwithstanding (see Chantraine 1948 [2013]: 301). This use is generally seen as a late-stage development of the Perfect (by which time it may be understood as a perfective gram), yet at least one non-sequential concentrative example in Homer seems secure (despite Chantraine 1953 [2015]: 230), given in (A13).

  (A13) CONCENTRATIVE PERFECT IN HOMER(?)
  ναὶ μὰ τόδε σκῆπτρον· τὸ μὲν οὔ ποτε φύλλα καὶ ὄζους
  φύσει, ἐπεὶ δὴ πρῶτα τομὴν ἐν ὄρεσσι **λέλοιπεν** (*Il.* 1.234–235).

  '(I will swear) by this scepter, which will never sprout leaves and shoots,
  [and it hasn't done so] since first it **left** its stump in the mountains'.

  Here, the Perfect occurs in a temporal clause that must refer to action anterior to the state described by φύσει, which makes it difficult to read this as stative ('is gone (from)'). Further, the adverb πρῶτα clearly restricts the time reference of the act of leaving to the (remote) past ('since first it left'). This makes it difficult to read λέλοιπεν as resultative 'has left' (compare the

ungrammaticality of English **I have first done this*). Finally, the fact that the main verb is in the Future tense rules out a counter-sequential reading ('since it had left'). Another possible example, but without πρῶτα, may be found at *Il.* 21.156 (but cf. §A.1.3 above).

By contrast, the Pluperfect in Homer, at least for certain lexical items, often has a concentrative interpretation and is even used in sequential narrative contexts (see Wackernagel 1926–1928 [2009]: 238 for discussion with examples), as in the formula **ὀρώρει** δ᾽ οὐρανόθεν νύξ 'and night **emerged** from heaven' (e.g., *Od.* 5.294). Other Pluperfects commonly found in concentrative function include βεβλήκει 'struck, smote' (e.g., *Il.* 5.66) and βεβήκει 'went' (e.g., *Il.* 1.221). This usage is Archaic only, not occurring in Attic (Wackernagel 1926–1928 [2009]). The Pluperfect, which Schwyzer–Debrunner (287) call the "Imperfekt zum Perfekt", loses its concentrative-sequential usage over time, in a manner similar to (though earlier than) the Imperfect, even while the Perfect is itself acquiring concentrative-sequential uses (as it grammaticalizes towards being a perfective gram; cf. §A.2.6 below).

A.1.7 Counter-sequential readings

This reading is variously called "counter-sequentiality" (Givón 2001: 293–296), "out-of-sequence" narration (Bybee et al. 1994: 62), "relative past" time (E. Dahl 2010: 11), or simply "anteriority." I refer to the reading as "counter-sequential" or "relative past" and to the contexts that license it (whether dependent or independent clauses) as "anterior" contexts. The counter-sequential reading locates an eventuality in the past prior to some other past eventuality or vantage point (as when t_0 is "past shifted"). It is generally considered in the semantic literature to be a reading of the perfect aspect (Klein 1994: 130–133; Comrie 1976: 53, 55–56, 81), most commonly expressed across languages by the (plu)perfect, perfective, or simple past gram types (cf. Bybee et al. 1994). Strictly speaking, this reading is not independent from the other readings of the perfect aspect and, accordingly, can have a resultative (type *had been born*), experiential (type *had been to Paris*), or universal (type *had been doing*) nuance. The last of these has already been treated in Section A.1.5 above. In anterior contexts the distinction between these perfect values and the concentrative reading is typically neutralized: Compare English *We told them that we had already met* (experiential perfect) vs. *We told them where we had met for dinner last night* (concentrative). The former embeds *we have already met* (Perfect), the latter embeds *we met for dinner last night* (Preterite). This neutralization seems to hold also in Greek.

- Counter-sequential Aorist: The Aorist is the preferred means of expressing anteriority in subordinate clauses at all stages of Ancient Greek (cf. Delbrück 1879: 106–107; Rijksbaron 2002: 20). This is especially true in Homer, where the Pluperfect is dispreferred in anterior contexts. A discussion of the counter-sequential Aorist in Homer, with further examples, is to be found in Hollenbaugh 2018: 40–41. Chantraine (1953 [2015]: 214) acknowledges the use in Homer, with examples, though he is reluctant to view it as "proper value" of the Aorist. In my view, since the Aorist is plainly grammatical in anterior contexts—and indeed is preferred in them—then the counter-sequential reading is as proper to it as any other. In (A14) we find the Aorist used in "anterior" contexts, which may have a resultative (τολύπευσε 'had accomplished') or experiential (πάθεν 'had endured') nuance.

(A14) Counter-sequential Aorist in Homer
ἠδ᾽ ὁπόσα **τολύπευσε** σὺν αὐτῷι καὶ **πάθεν** ἄλγεα (*Il.* 24.7).

'And (Achilles would brood on) all that he **had accomplished** with him (Patroclus) and all the woes he **had endured**'.

- Counter-sequential Imperfect: This is a fairly common use of the Imperfect in Homer, which, again, may have a resultative (A15a) or an experiential nuance (A15b) (cf. similarly *Il.* 5.702, 13.521, 17.377, 22.437). For a discussion of the use in Homer see Hollenbaugh 2018: 37–38, and cf. Delbrück 1897: 269; Friedrich 1974: 15. Cross-linguistically, simple past grams (like the Imperfect), being neutral in aspect, are commonly employed in counter-sequential function, especially when no perfect(ive) or pluperfect grams exist in the language (Comrie 1976: 58; cf., e.g., the Old and Middle English Preterite (Traugott 1992: 183; Fischer 1992: 245)).

  (A15) COUNTER-SEQUENTIAL IMPERFECT IN HOMER

  a. Ἕκτωρ μὲν Πάτροκλον ἐπεὶ κλυτὰ τεύχε᾽ **ἀπηύρα**$_{[\text{IPF.}]}$,
  εἶλχ᾽$_{[\text{IPF.}]}$ (*Il.* 17.125–126).

  'But Hector, when he **had stripped**$_{[\text{IPF.}]}$ from Patroclus the glorious armor,
  began dragging$_{[\text{IPF.}]}$ (him)'.

  b. ὣς ἔφεπε$_{[\text{IPF.}]}$ κλονέων πεδίον τότε φαίδιμος Αἴας,
  δαΐζων ἵππους τε καὶ ἀνέρας. οὐδέ πω Ἕκτωρ
  πεύθετ᾽$_{[\text{IPF.}]}$, ἐπεί ῥα μάχης ἐπ᾽ ἀριστερὰ μάρνατο$_{[\text{IPF.}]}$ πάσης (*Il.* 11.496–498).

  'Thus glorious Ajax, routing (them), drove$_{[\text{IPF.}]}$ (them) over the plain at that time,
  slaying both horses and men. But Hector **had** not yet **learned**$_{[\text{IPF.}]}$ (about this),
  since he was fighting$_{[\text{IPF.}]}$ on the left of the whole battle'.

- Counter-sequential Pluperfect: The plain Perfect does not seem to be capable of use in anterior contexts in Homer. However, the Pluperfect can be used, at least in a main clause, to refer to past action that is anterior to some other action in the past (Chantraine 1953 [2015]: 231), as in (A16). Here, Sarpedon has just killed Tlepolemus by striking him on the neck, but we are told that, before his death, Tlepolemus 'had struck' (βεβλήκειν) Sarpedon a powerful blow as well.

  (A16) COUNTER-SEQUENTIAL (RESULTATIVE) PLUPERFECT IN HOMER
  τὸν δὲ κατ᾽ ὀφθαλμῶν ἐρεβεννὴ νὺξ ἐκάλυψεν·
  Τληπόλεμος δ᾽ ἄρα μηρὸν ἀριστερὸν ἔγχεϊ μακρῷι
  βεβλήκειν, αἰχμὴ δὲ διέσσυτο μαιμώωσα (*Il.* 5.659–661).

  'And down upon his eyes dark night enshrouded him (Tlepolemus).
  But Tlepolemus **had [already] struck** (Sarpedon) upon the left thigh
  with his long spear, and the point had sped through ravenously'.

  Another example, if it is regarded as a Pluperfect (cf. Cunliffe 2012: 408), is ἐφθίατο 'had perished' at *Il.* 1.251 (contrast stative Pf. ἔφθιται 'is dead' at *Od.* 20.340, on which cf. §A.1.1 above).

A.1.8 INCEPTIVE READINGS

By *inceptive* (also called "ingressive," for the Aorist, and "inchoative," for the Imperfect) I refer to a verb of any functional category (mostly Aorist or Imperfect) that in some context means "began to be/do X," where X is the lexical meaning of the verb. References to handbook treatments are given for each functional category below. An extensive treatment of the inceptive use of the Aorist and Imperfect in Greek is now to be found in Hollenbaugh 2020b, which demonstrates a near-complementary distribution of the Aorist and Imperfect in inceptive use. The Aorist inceptive is built only to state or state-like predicates that have experiencer subjects (such as ἐβασίλευσε 'became king' or ἐδάκρυσε 'started weeping'), whereas the Imperfect inceptive may be built to any kind of predicate (state, activity, or accomplishment). In other words, in inceptive contexts the Aorist is restricted to a certain class of lexical items, while the Imperfect is not. As noted above

(§A.1.6), the inceptive use frequently occurs in sequential narration, often alongside concentrative (or other terminative) readings.

Hollenbaugh 2020b also includes a semantic analysis of inceptives, treating the Aorist and Imperfect inceptive as related but distinct phenomena. To discuss the details here would bring us too far afield, but we may observe that the inceptive use of the Imperfect is entirely predicted under a "neutral aspect" semantics, since the inceptive interpretation arises when t_A partially overlaps with t_E, such that the beginning (left edge) of t_E is located within t_A, as shown in Figure 8.

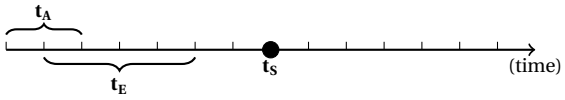

FIGURE 8: Inceptive interpretation (NEUTRAL aspect, past tense)

For perfect(ive) aspect, the matter is trickier, since this requires t_E to be included in t_A, with which Figure 8 is plainly incompatible. Following Bary & Egg (2012: 123–124), Hollenbaugh 2020b supposes a "coercion operator" "INGR" for the Aorist (see there for details), which maps unbounded predicates (states) onto bounded ones (the perfect(ive) aspect), converting the state predicate to an inceptive *event* that is included in t_A, thereby satisfying the semantic requirement of prefect(ive) aspect that $t_E \subseteq t_A$. This correctly predicts that, at the Archaic stage, the inceptive readings of the Aorist should arise only to state predicates, in contrast to the Imperfect, which is unrestricted by predicate type in this use.

- Inceptive Aorist: This is usually called "ingressive" in the literature, referring to the use of the Aorist to designate the entry into a state. It is restricted to state (or "state-like") predicates. For discussion and examples in the Greek grammatical literature see Smyth 1956: 430; Rijksbaron 2002: 20–21; Gildersleeve & Miller 1900: 104–105; Kühner–Gerth: 155–157; Goodwin 1889: 24. On the inceptive interpretation of perfective aspect cross-linguistically see (e.g.) Comrie 1976: 19–20 and Binnick 1991: 154. An example from Homer is (A17) (cf. also (2b) above and *Il.* 1.595–596, *Od.* 11.55 (= 395)).

  (A17) INCEPTIVE AORIST IN HOMER: STATE PREDICATE
  ὣς ἔφατ᾽, **ἔδδεισεν** δὲ βοῶπις πότνια Ἥρη (*Il.* 1.568).

  'Thus he spoke, and ox-eyed queen Hera **was seized with fear**'.

  Wackernagel (1926–1928 [2009]: 224) and Jacobsohn (1933: 308–309) suggest that the Greek Aorist inceptive may be an innovation, as it is rare in Homer (in competition with the inceptive Imperfect) and virtually lacking in Vedic Sanskrit (but cf. E. Dahl 2010: 293–296, following Delbrück 1897: 239–240 and Hoffmann 1967: 157–158).

  While as a rule the Aorist is only inceptive when built to state predicates in Homer (see above), some Homeric Aorists to activity predicates may admit of an inceptive interpretation, though none seem securely to require this reading. Such potential cases include: ἔβησαν, perhaps sometimes to be read 'set out' (e.g., *Od.* 5.107–108, followed by description of the return journey); ἤλασεν 'started driving(?), drove' (*Il.* 23.514); κομίσαντο 'began tending(?), rescued' (*Il.* 1.594). Probably unexceptional is ἠγήσατο 'became leader' (*Od.* 2.405=3.29=7.37, 5.192), understanding ἡγέομαι as a state predicate 'be leader'.

- Inceptive Imperfect: This is often called "inchoative" in the literature, referring to the use of the Imperfect to designate the entry into a state or event (most often activity predicates). It

is unrestricted by predicate type, though achievements are dispreferred for practical reasons. For discussion and examples in the Greek grammatical literature see Rijksbaron 2002: 17–18, 21; Schwyzer–Debrunner: 277; Chantraine 1953 [2015]: 222; Jacobsohn 1933: 308–309. On the inceptive interpretation of imperfective aspect cross-linguistically see Hedin 2000: 250–252. Examples from Homer are in (A18) (cf. also (A15a) above and *Il.* 1.467–468, 9.662).

(A18) INCEPTIVE IMPERFECT IN HOMER: ACTIVITY AND STATE PREDICATES

a. τοῖσιν δὲ Χρύσης μεγάλ᾽ **ηὔχετο** χεῖρας ἀνασχών (*Il.* 1.450).

'Then Chryses, having lifted up his hands, **started praying** aloud for them'.

b. ἀλλ᾽ αὕτως ἀποβάντες **ἐκείμεθα** νηὸς ἄπαντες (*Od.* 13.281).

'But having disembarked from the ship in such a state, we all **lay down**' (ex. Chantraine 1953 [2015]: 222).

The supposed scarcity of inceptive Imperfects in Homer, said to become more common later on (Friedrich 1974: 10), along with the rarity of the inceptive Aorist compared to later Greek (cf. above) accords with the proposal of Hollenbaugh 2018 (followed here) that the Homeric verb system does not yet make a categorical contrast between perfective and imperfective aspect (whereas Classical Greek does).

- Inceptive Pluperfect: At the Archaic stage, the Perfect seems not to have inceptive as a use, though perhaps some of its resultative readings could be counted here. However, in the Pluperfect some of the same verbs that favor concentrative-sequential readings (cf. §A.1.7 above) may also show inceptive readings in the past, as in ἣ μὲν θαμβήσασα πάλιν οἶκόνδε **βεβήκει** 'having become amazed, she **set out to go** back home' (*Od.* 1.360; cf. *Il.* 6.495) (so interpreted by Wackernagel (1926–1928 [2009]: 238)).

A.1.9 COMPLEXIVE READINGS

Cf. n.11 above for discussion of this functional label. *Complexive* refers to a past eventuality (state or activity) that is coextensive with assertion time (i.e., "bounded" or "complete" in the past, such that $t_E = t_A \wedge t_A \prec t_0$). It differs from the "stative" reading (cf. §A.1.1 above) in that the complexive reading refers to states that no longer hold but have run their course from beginning to end in the past (type ἐβασίλευσε 'was king, reigned'). Like the inceptive reading (cf. §A.1.8 above), the complexive is found mainly in the Imperfect at the Archaic stage (afterwards the Aorist). Citations within the Greek grammatical literature will be given for each functional category below. Within the semantic and typological literature, the reader is referred (e.g.) to Comrie 1976: 16–17 (for both perfective and imperfective aspect cross-linguistically), E. Dahl 2010: 73–74 (for perfective aspect cross-linguistically, under the name "terminative-egressive"), and Bary & Egg 2012: 113 (for the formal semantics of the use in Classical Greek).

- [Complexive Aorist?]: On the complexive use of the Aorist as an innovation of Greek, being scarce or absent in Homer but far more common later on, see Purdie 1898: 67–70; Jacobsohn 1933: 305–310; Schwyzer–Debrunner: 281.[65] Chantraine's (1953 [2015]: 213–214) examples of

65. Though Purdie's (1898: 67 ff.) "constative" label resembles in some respects what is here referred to as *complexive*, it should be noted that her term is significantly broader in its scope than mine. By "constative," she means the bare statement of a fact with no further implication of "perfectivity," which basically contrasts with the "ingressive" (= inceptive) and "effective" (= punctual concentrative or egressive) uses (65). Purdie (1898: 67–68) explicitly follows Krüger's (1873: 168) "konzentrierte Erscheinung," which is said to have a "summarizing" effect and is directly linked to the use of the Aorist in narration. To be clear, I do not consider the "constative" or "statement-of-fact" use of the Aorist to be a legitimate "reading" (abandoning terminology from Hollenbaugh 2018), since it makes no reference to temporal parameters and is thus impossible to evaluate in a non-

the Aorist in Homer with a "thème duratif" are not complexive in the sense defined here ($t_E = t_A$) but are rather concentrative uses that happen to have a non-punctual runtime of t_E (cf. above §A.1.6 and discussion of (A21) below), or else are experiential uses. However, there are one or two possible candidates for complexive usage of the Aorist in Homer, of which the more questionable is (A19) (cf. Gildersleeve & Miller 1900: 106).

(A19) COMPLEXIVE AORIST IN HOMER?
ἐννῆμαρ **ξείνισσε** καὶ ἐννέα βοῦς ἱέρευσεν (*Il.* 6.174).

'For nine days he **entertained/hosted** him and slaughtered nine oxen'.

Here, the meaning is likely pluractional: 'kept entertaining him (each day) for nine days'.[66] All other examples in Homer of ἐννῆμαρ 'for nine days' (or ἑξῆμαρ 'for six days') with a verb in the past indicative show the Imperfect (rarely Perfect, cf. §A.1.5 above). Likewise, the adjective παννύχιος 'all night long' occurs in Homer always with the Imperfect or Pluperfect (when a past indicative is used), as seen above in (4), never the Aorist (but cf. (A20b) below). This is generally true of all explicit markers of extent of time—the Aorist is dispreferred in favor of the Imperfect—with few genuine exceptions.[67]

In all of Archaic Greek, only the two examples in (A20) look genuinely complexive (but cf. n.69 below). The first, from the *Odyssey*, occurs with a stated definite time interval (τρία ἤματ᾽ 'for three days') and occurs in the same line as a complexive Imperfect to a verb phrase of virtually identical meaning. The second, from Pseudo-Hesiod's *Shield of Heracles* (*SH*), occurs with παννύχιος 'all night', a word that in Homer invariably signals complexive interpretation when paired with the Imperfect or Pluperfect but never occurs with the Aorist.[68]

(A20) GENUINE COMPLEXIVE AORIST IN ARCHAIC GREEK

a. τρεῖς γὰρ δή μιν νύκτας ἔχον[IPF.], τρία δ᾽ ἤματ᾽ **ἔρυξα**[AOR.]
ἐν κλισίῃ (*Od.* 17.515–516).

'I held[IPF.] him for three nights, and **kept**[AOR.] him for three days in my hut'.

b. παννύχιος δ᾽ ἄρ᾽ **ἔλεκτο** σὺν αἰδοίῃ παρακοίτι (Ps.-Hes. *SH.* 46)

'And all night he **lay** with his venerable wife'.

The best candidate for a complexive Aorist in the *Iliad* known to me is not indicative but an Aorist *participle*: Οἰνεὺς γάρ ποτε δῖος ἀμύμονα Βελλεροφόντην / ξείνισ᾽ ἐνὶ μεγάροισιν

subjective way. Examples referred to this reading in the grammatical literature are here dispersed mostly among the (non-punctual) concentrative, experiential, and complexive uses of the Aorist (in some cases inceptive), on a case-by-case basis. I have been guided in my categorization of such examples always by the relations that hold between well-defined temporal parameters relative to the context in which the verb occurs on a given occasion.

66. Compare *Il.* 3.232: πολλάκι μιν ξείνισσεν ἀρηΐφιλος Μενέλαος 'Often Menelaus, dear to Ares, entertained him/received him as a guest'. Note that the predicate belongs to the "activity" situation type, which otherwise do not occur in the Aorist with complexive interpretation (until the post-Classical stage; cf. below §A.3.9). In addition, *Il.* 6.174 has a variant reading with the Ipf. ξείνιζε, showing the regular way of designating complexive meaning in Homer, which may well be original, having been later "corrected" by replacing it with the Aorist (so Jacobsohn 1933: 307–308). If so, this would support the view of a diachronic change whereby Archaic Greek preferred the Imperfect in complexive contexts, while the later language prefers the Aorist.

67. The three occurrences in Archaic Greek of the Aorist with the formula (τελεσφόρον) εἰς ἐνιαυτόν 'until the year (is/was) fulfilled' (*not* 'for a (whole) year') are, for various reasons that I lack space to discuss in detail, not to be taken as genuinely complexive (namely *Il.* 21.444, *Od.* 14.292, and *HH* 3.344–345).

68. Note that not all adverbials expressing duration entail a complexive interpretation; many are concentrative. Utterances like νύκτα ἀέσαμεν 'during the night we slept' are true if "we" did all of our sleeping some time during the night, and so are regarded as concentrative, whereas utterances like εὗδον παννύχιοι 'they slept all through the night' are false unless the eventuality (SLEEP) is understood as holding for the entire span of the assertion time (NIGHT) and so are regarded as complexive.

ἐείκοσιν ἤματ᾽ ἐρύξας ‘Brilliant Oineus once hosted blameless Bellerophontes in his halls, detaining [*having detained] him for twenty days’ (*Il.* 6.216–217).[69]

In all, the case for a complexive use of the Aorist at the Archaic stage is not strong, being emergent at best (cf. discussion in §4.4 above). In two or three instances complexive interpretation seems warranted, and we may note that in these and most borderline cases the Aorist is built to a state predicate (as ἔρυξα ‘kept’, ἔλεκτο ‘lay’), anticipating the distribution observed in Classical Greek. Thus, while these examples may be viewed as early precursors to Classical usage, I do not regard complexive as a *regular* use of the Aorist at the Archaic stage, and I exclude the coextension relation $t_E = t_A$ from its denotation (cf. (17) above in §6.1.1). Clearly preferred in complexive contexts at this stage, even to state predicates, is the Imperfect, which is regularly found in the scope of adverbials expressing extent of time (see next item) in all but the cases just mentioned.[70]

- Complexive Imperfect: The Imperfect is the *regular* way of expressing the complexive in Archaic Greek, in strong preference to the Aorist (Jacobsohn 1933: 305–310). An example has been given above in (4) above (see also (A26) below); cf. Gildersleeve & Miller 1900: 90–91 for further examples. As with the inceptive (cf. §A.1.8 above), this use of the Imperfect is unrestricted by predicate type, except that practically the verb must belong to either the state, activity, or (perhaps) accomplishment situation types. In addition to the activity predicates quoted in (4) above, state predicates are quotable in such phrases as ηὗδον παννύχιοι ‘they slept all night’ (*Il.* 2.2, 10.2, 24.678; *Od.* 7.288) or δύω νύκτας δύο τ᾽ ἤματα συνεχὲς αἰεί / κείμεθ᾽ ‘for two nights and two days the whole time continuously we lay’ (*Od.* 9.74–75; similarly *Od.* 10.142–143). Thus, in Archaic Greek the Imperfect is the preferred form for complexive usage even to state predicates, unlike the situation in later Greek (where the Aorist is preferred for complexive *states* and the Imperfect applies elsewhere).[71]

  As noted above, when a past indicative verb occurs in the scope of an expression of extent or duration of time, such as παννύχιος ‘all night long’ (as in (4) above and (A21) below) or

69. The adverb δήν ‘for a long time’ occurs with Aorists at *Il.* 17.695=*Od.* 4.704, *Od.* 17.72–73, and *Od.* 21.425–426. However, at *Il.* 17.695=*Od.* 4.704, the adverb refers to the effects of the verb, not the verbal action itself: δὴν δέ μιν ἀμφασίη ἐπέων λάβε ‘speechlessness seized him [and thus held him] for a long time’. Compare English *I went home for the rest of the day*, which does not mean that it took the rest of the day to get home but that I remained home for the rest of the day after going there. At *Od.* 17.72–73 the verb τράπετο ‘turned’ is negated, and so δήν seems to target not the action of turning but the span of his *not* turning away. The verb at *Od.* 21.425–426 is again negated, but here the action *does* seem to be targeted by the adverb: οὐδέ τι τόξον / δὴν ἔκαμον τανύων ‘I did not labor long at all in stringing the bow’. This would seem to be complexive. However, *Il.* 1.512 provides some evidence that verbal predicates with δήν are not necessarily complexive, since it is a non-specific and subjective unit of time (contrast phrases like παννύχιος ‘all night’, ἔτεα δυώδεκα ‘for twelve years’, and the like). When Zeus ἀκέων δὴν ἧστο$_{[IPF.]}$ ‘sat silent for a long time’, he does not actually stop sitting silent after this clause, but continues to do so until Thetis speaks again. This is possible because ‘sit for a long time’ is not really a telic event in the same way that ‘sit for ten minutes’ is, and so the event’s boundedness need not be precisely coextensive with the interval referred to by δήν. So, in the case of the Aorist at *Od.* 21.425–426, it may be that δήν simply asserts that the event of laboring in question has a *relatively* long duration but is not absolutely coextensive with any clearly defined interval. A similar observation can be made for indefinite adverbials referring to brief durations (e.g., *Il.* 23.418: μάλλον ἐπεδραμέτην$_{[AOR.]}$ ὀλίγον χρόνον ‘they both ran harder for a little while’).

70. Past stative uses of the Aorist to state predicates, such as ἐφίλησα ‘loved, used to love’, are by some considered complexive. If placed here, these would add several examples of the complexive use in Homer (cf. n.21). However, I class them as stative (cf. §A.1.1 above), since unlike the complexive these examples characterize states as *ongoing* at speech or evaluation time.

71. This includes “attained states” built to event predicates. These can be treated as complexive to states resulting from the attainment of the event referred to by the lexical verb. An example is νύκτα δι᾽ ἀμβροσίην μελεδήματα πατρὸς **ἔγειρεν** ‘Throughout the ambrosial night anxiety for his father **kept him awake**’ (*Od.* 15.8). The lexical item ἐγείρω typically means ‘awaken’, but here it refers to the state resulting from awakening (viz. being awake), which is said to hold for a given length of time (viz. all night long).

ἐννῆμαρ ‘for nine days’, the verb form is invariably either Imperfect or Pluperfect (rarely Perfect, cf. §A.1.5 above), with the possible exceptions just mentioned ((A19)–(A20)). Others include εἰνάνυχες ‘for nine nights’ (*Il.* 9.470) and εἰνάετες ‘for nine years’ (e.g., *Il.* 18.400, *Od.* 3.118, 5.106–107, 14.240, 22.228), always with an Imperfect. Illustrating the difference between the complexive use of the Imperfect and the concentrative use of the Aorist is (A21).

(A21) COMPLEXIVE IPF. AFTER CONCENTRATIVE AOR. IN HOMER
δόρπον ἔπειθ᾽ εἵλοντο[AOR.] κατὰ στρατόν· αὐτὰρ Ἀχαιοί
παννύχιοι Πάτροκλον **ἀνεστενάχοντο**[IPF.] γοῶντες (*Il.* 18.314–315).

‘Then they took[AOR.] their supper along the encampment. Meanwhile the Achaians **lamented**[IPF.] all night, mourning Patroclus’.

Even though both the Aorist and the Imperfect in (A21) refer to an event of some duration, only the Imperfect occurs with an explicit indication of extent of time (παννύχιοι ‘all night’) and can be said to be complexive, such that the eventuality time (i.e., their mourning) lasts exactly as long as the assertion time (i.e., all night). The Aorist in this example, by contrast, refers to an event that, while non-momentary, is nevertheless fully contained within the assertion time and can be said to be concentrative-sequential.[72]

- [Complexive Perfect]: There are one or two possible examples of the Perfect in Homer with a definite time span (e.g., (A12) above), though in the cases so far noticed the definite time interval (t_A) includes the speech/evaluation time ($t_{0/S}$) rather than preceding it, which yields a universal interpretation rather than complexive (cf. §A.1.5 above).

  Complexive Pluperfect: The Pluperfect, on the other hand, occurs as readily in complexive contexts as does the Imperfect (cf. discussion above under §A.1.6 about the Pluperfect being the “Imperfect to the Perfect”), as shown in (A22) (cf. similarly *Od.* 11.11 and *HH* 3.91–92). Here, the definite time interval (t_A) designated by παννυχίη ‘all night’ has clearly terminated before the speech time (t_0) of this passage of quoted speech, and the eventuality of “standing” is asserted to last exactly as long as the night ($t_E = t_A$).

  (A22) COMPLEXIVE PLUPERFECT IN HOMER
  παννυχίη γάρ μοι Πατροκλῆος δειλοῖο
  ψυχὴ **ἐφεστήκει**[PLPF.] γοόωσά τε μυρομένη τε (*Il.* 23.105–106).

  ‘For all night long the spirit of unhappy Patroclus
  stood over[PLPF.] me both lamenting and weeping’.

A.1.10 COUNTERFACTUAL READINGS

It is a peculiarity of Homer that the Imperfect in counterfactual conditional constructions (i.e., protasis with εἰ, apodosis with the modal particle ἄν/κέν) expresses only *past* counterfactuality (Chantraine 1953 [2015]: 324–325; Goodwin 1889: 96), while in later Greek the same construction regularly expresses *present* counterfactuality (but cf. Smyth 1956: 518–519). An example is (A23) (cf. similarly *Il.* 24.713–715; with optative apodosis at *Il.* 24.220–222).

72. Other complexive uses of the Imperfect in Homer include: *Od.* 7.253–254, 9.82–84, 10.28–29, 80–81, 12.397–399, 429–430, 447–448, 14.249–253, 314–315, and 15.476–477. For the Imperfect with a definite number designating the extent of time in Archaic Greek see *Il.* 9.470, 18.400, 21.45; *Od.* 3.118, 5.106–107, 388–389, 9.74–75, 10.142–143, 22.228, 24.63–64, 14.240 17.515, 24.63–64; Hes. *Th.* 56. Note that some but by no means all such examples can be felicitously rendered by the English Progressive (e.g., παννύχιος φερόμην at *Od.* 12.429 cannot be read as *‘I was being borne all night’ but, given what follows in line 430, only as ‘I was borne all night’), so the complexive interpretation cannot be taken to be simply a special case of the progressive or imperfective aspect.

(A23) IMPERFECT PAST COUNTERFACTUAL IN HOMER
καί νύ κε τὸ τρίτον αὖτις ἀναΐξαντ᾽ **ἐπάλαιον**,
εἰ μὴ Ἀχιλλεὺς αὐτὸς **ἀνίστατο** καὶ **κατέρυκεν** (*Il.* 23.733–734).

'And now having sprung up again a third time they **would have wrestled**,
if Achilles himself **had** not **stood up** and **restrained** them'.

The Aorist with ἄν/κέν expresses past counterfactuality (Chantraine 1953 [2015]: 325), as at all stages of Greek (e.g., *Il.* 2.155–156, 8.90–91; without negation at 16.617–618; with optative apodosis at *Il.* 5.311–312). The Imperfect and Aorist can co-occur in the same past counterfactual conditional (e.g., *Il.* 8.130–133, 22.202–204). The Pluperfect can be used similarly, as at *Il.* 8.366: εἰ. . . εἴδε᾽ 'if I had known' (cf. §A.2.10 below). Note that this example shows that counterfactuals in Greek are not limited by predicate type, being built to event or state predicates alike. For a semantic analysis of counterfactuality and its interaction with past tense and perfective aspect, particularly with respect to Modern Greek, see Iatridou 2000.

A.1.11 PERFORMATIVE/REPORTIVE READINGS

Of the forms here considered, only the Aorist is used in performative sentences, of the type *I now pronounce you man and wife*, though this does not occur until *after* the Archaic stage. The Greek Present indicative is, of course, also used in this way but not considered here (e.g., *Il.* 1.173–174, 1.577). An example for the Classical stage has been given above in Section 5.2 (7). The use appears to be limited to event predicates. Performative utterances are defined by Fortuin (2019: 5) as follows: "By uttering the sentence the speaker not only describes the event expressed by the predicate, but also performs the act described by the predicate at the moment of speech." "Reportives" constitute a closely related use (most often in in the second or third persons) to describe events unfolding before the eyes of a speaker, of the type used in stage directions or in sportscaster speech (type *She shoots, she scores!*). On performatives and reportives in general see Austin 1962 (origin of the term *performative* to describe this kind of speech act); Ö. Dahl 1985: 71–72, 81, 83, 206; and Fortuin 2019: 25–26. Cf. Lloyd 1999 and Bary 2012 on the phenomenon in Greek in particular, with further references to the linguistic and semantic literature.

This usage of the Aorist is commonly referred to in Greek grammars as the "tragic" or "dramatic" Aorist (e.g., Kühner–Gerth: 163; Gildersleeve & Miller 1900: 113–114; Smyth 1956: 432), since its occurrence is practically restricted to Attic drama (not only tragedy, according to Schwyzer–Debrunner (282)), though it may occur rarely in prose (a possible example being Hdt. 7.46.1 (A28), on which cf. §A.2.2 below). For examples from both genres see Kühner–Gerth: 163–165 (cf. Gildersleeve & Miller 1900: 113). The more modern linguistic term *performative* has been applied by Lloyd (1999), followed more recently by Bary (2012), who provides a semantic analysis of the phenomenon. Essentially, the use of the Aorist is seen as a sort of compromise for speakers' desire to express perfective aspect in the present moment. The Present satisfies this condition only in tense, the Aorist only in aspect. The two forms are thus equally viable and hence alternate in performative utterances in the Classical language. As stated in Section 6.1.1, I take the performative/reportive reading of a perfective gram to arise when eventuality time is coextensive with speech time (i.e., $t_E = t_S$), which is unavailable to the Aorist at the Archaic stage.

It is an interesting fact that we do not find any instance of a performative/reportive Aorist in the Homeric language. Lloyd's (1999: 41) sole Homeric example (viz. *Il.* 14.95=17.173) is probably not performative/reportive but stative (cf. §A.1.1 above), while the Aorist at *Od.* 9.403 is more likely recent past/resultative (cf. §A.1.3 above). A more likely example of the reportive reading is *Il.* 21.150, though the stative and resultative readings cannot be excluded: τίς πόθεν εἰς ἀνδρῶν, ὅ μοι ἔτλης

ἀντίος ἐλθεῖν; 'Who among men (are you and) from where, that dare [have courage? have dared?] to come forth against me?' Still, Schwyzer–Debrunner (282) believe the usage is original and that its "popular" character may explain its scarcity in (or, more probably, total absence from) Homer.

A.1.12 FUTURATE READINGS

The label "futurate," coined by Prince (1973), standardly refers to a verb form not overtly marked for future tense that has future reference in certain contexts, of the type *My plane leaves/is leaving tomorrow at noon*. In the scope of this paper, the futurate use applies only to the Aorist (Smyth 1956: 432; Gildersleeve & Miller 1900: 114) and, occasionally, to the Perfect (Smyth 1956: 435; Schwyzer–Debrunner: 286–287). Of course, the Present indicative can be used to refer to future time (Smyth 1956: 421–422), though it is not considered here. The use appears to be restricted to transformative events (i.e., achievements and accomplishments), strongly favoring one lexical item in particular: ὄλλυμαι 'be lost, perish', whose Aorist forms are attested with future reference both in Homer (A24a) and in Classical Greek (see citations in Gildersleeve & Miller 1900: 114). Other lexical items are met with, however.

For linguistic treatments of futurate constructions cross-linguistically, see De Wit 2017; Iatridou 2000: 240; Huddleston 1977; Dowty 1977; Goodman 1973. De Wit (2017: 190 and passim) considers, in particular, the interaction of perfective aspect and present tense to yield futurate interpretations in Slavic languages and others. Past tense grams seem not to have future time reference unless they are embedded under a modal, of the type *If I **had** a million dollars* or *I think it's time we **went** to bed* (cf. Iatridou 2000). In English, only the fixed phrase *You got it!* (in the meaning *Sure!*) shows an unembedded past tense with future reference, though this ultimately seems to be from the presential (stative) Perfect *have got* (cf. Kiparsky 2002: 113) and so is not properly a past tense in any case. Perfective grams, on the other hand, are cross-linguistically common in contexts of future time reference, as De Wit (2017: 190) shows.[73]

- [Futurate Aorist?]: Two examples of future-referring Aorists in Homer (cf. Chantraine 1953 [2015]: 214–215) occur in apodoses of conditional sentences containing the Future indicative (Fut.), given in (A24).

  (A24) FUTURATE AORIST INDICATIVE IN HOMER

  a. εἰ μέν κ᾽ αὖθι μένων Τρώων πόλιν ἀμφιμάχωμαι,
  ὄλετο[AOR.] μέν μοι νόστος, ἀτὰρ κλέος ἄφθιτον ἔσται[FUT.] (*Il.* 9.412–413).

  'If I stay here and fight around the city of the Trojans,
  then **lost** for me **is**[AOR.] [i.e., will be] my return home but immortal fame will be[FUT.] mine' (ex. and tr. Wackernagel 1926–1928 [2009]: 228; cf. similarly ≈ *Il.* 9.414–416).

  b. εἴ περ γάρ τε καὶ αὐτίκ᾽ Ὀλύμπιος οὐκ ἐτέλεσσεν,
  ἔκ τε καὶ ὀψὲ τελεῖ[FUT.], σύν τε μεγάλωι **ἀπέτεισαν**[AOR.] (*Il.* 4.160–161).

  'For even if indeed the Olympian has not accomplished it straightaway,
  he will accomplish[FUT.] it completely even late on, and then they **will pay**[AOR.] together with a heavy price' (ex. and tr. id.: 228).

  In addition, there is an example of the Aorist *infinitive* with future reference in the "Brothers Poem" of Sappho (6–9): λίσσεσθαι. . . ἐξίκεσθαι. . . κἄμμ᾽ ἐπεύρην 'to pray that he will return

73. For example, in Tunisian Arabic, the Perfective is often used to refer to an event located in the future, as in *hāni **jīt***[PFV.] 'Here **I come**', most often used in contexts signifying 'I'll be right there' or 'I'll be right back'. Similarly, the set phrase ***mšēt***[PFV.] *m^{c}āk* 'It **went** with you' idiomatically has a meaning close to English 'You('ve) got it!'/'You bet!' or 'Sure!'.

and find us'.

Wackernagel (1926–1928 [2009]: 228–229) is careful to distinguish the basic type of futurate Aorist represented by (A24) above from the Aorist in "future *perfect*" function, which he says is found only in post-Homeric Greek (cf. §A.2.12 below). An example from Classical Greek is given in (8) above, where "for κατεργάσαντο," Wackernagel (1926–1928 [2009]: 228) says, "a Latin speaker would have used the future perfect, *perfecerint*" 'will have accomplished'. Despite his statement to the contrary, at least one instance of the Aorist in Homer seems to have this kind of "future perfect-like" function, shown in (A25). Note that at this point in the narrative, Agamemnon's men have not yet repossessed Briseis, and so the action referred to by the Aor. ἀφέλεσθε lies strictly in the future but logically precedes the action of the Future μαχήσομαι, since the repossession gives the reason for the fighting (or rather lack of fighting despite this reason).

(A25) FUTURATE AORIST IN HOMER ("FOR FUTURE PERFECT")
χερσὶ μὲν οὔ τοι ἐγώ γε μαχήσομαι[FUT.] εἵνεκα κούρης,
οὔτε σοὶ οὔτέ τωι ἄλλωι, ἐπεί μ᾽ **ἀφέλεσθέ**[AOR.] γε δόντες (*Il.* 1.298–299).

'I will not fight[FUT.] for the girl with my hands, neither against you nor any other, since you **will have taken** (her) **back**[AOR.] from me who gave her (in the first place)' [i.e., the ones who gave her will be the ones to have taken her back].

Given that the denotation in (17) rules out ordinary future time reference for the Aorist at the Archaic stage, the three examples in (A24) and (A25) can be accounted for in terms of "future shifting." That is, the denotation of (17) does not allow future tense interpretation *per se*, in the sense that it forbids assertion time from following evaluation/speech time ($t_A \not\succ t_{0/S}$). Yet the eventuality *can* be interpreted as located in the future in a context where the evaluation time itself is located in the future relative to speech time ($t_S \prec t_0$), called "future shifted." In such cases, the eventuality time still must at least partially precede the (future-shifted) evaluation time ($t_E \preceq t_0$), per the denotation in (17), even while it happens to follow the moment of speech ($t_S \prec t_E$)—a possibility which (17) does not rule out. In order to have future shifting, however, the context needs to supply an evaluation time located in the future relative to speech time. For this reason, all examples of futurate Aorists in Homer occur in conjunction with verbs in the Future tense, which serves to establish a future-shifted evaluation time (t_0) in the discourse, as can be seen in (A24) and (A25) above.

- [Futurate Perfect]: According to Schwyzer–Debrunner (286–287), one possible Homeric example of the Perfect with future reference is *Il.* 15.128: μαινόμενε, φρένας ἠλέ, **διέφθορας** 'Madman, crazed in your wits, you **will perish/are doomed**!' However, Chantraine (1953 [2015]: 229) suggests that διέφθορας should rather be understood as presential (stative-resultative) 'you've lost your wits, you're beside yourself'. In any case, it is worth noting that the futurate Perfect, like the futurate Aorist, is not attested in "future perfect" function (in the English or Latin sense) until after the Archaic period (cf. §A.2.12 below).

A.1.13 EGRESSIVE READINGS

The egressive interpretation is peculiar to the Aorist and arises when just the culmination of an action is at issue (cf. Gildersleeve & Miller 1900: 94 "Aorist of attainment"). It may thus be thought of, in a sense, as the mirror image of the inceptive interpretation (cf. §A.1.8 above, Figure 8), illustrated in Figure 9.

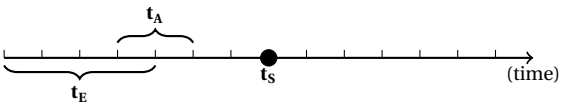

FIGURE 9: Egressive interpretation

The term *egressive* comes from E. Dahl 2010: 73–76, but the use is also referred to under the labels "effective" (e.g., Purdie 1898: 65) and "resultative" (Smyth 1956: 430).

Though scarce at the Archaic stage, there may be an example or two already in Homer. In (A26), the Aor. κάππεσον (to the lemma καταπίπτω 'fall down') refers only to the final, culminating stage of the verb, which I translate 'dropped down' (i.e., '*finished* falling, landed'), since the beginning and middle stages of Hephaestus' fall are referred to in the preceding lines (Ipf. φερόμην 'was borne, fell').

(A26) EGRESSIVE AORIST IN HOMER(?)
πᾶν δ᾽ ἦμαρ φερόμην, ἅμα δ᾽ ἠελίωι καταδύντι
κάππεσον ἐν Λήμνωι (*Il.* 1.592–593).

'I was borne down all day long, and as the sun set
I **dropped down** in Lemnos'.

Cf. similarly the Aor. ἔφυγεν 'escaped' (focusing on the termination of the action) beside Ipf. ἔφευγεν 'fled' (referring to the action in its entirety), for which see (2) above. A possible example in the negative is οὐδ᾽ ἔτ᾽ ἔδησαν 'they did not end up binding (him) after all' (*Il.* 1.406), to the verb δέω 'bind' (but cf. §A.2.2 below for an alternative interpretation). Another example, though it occurs in an anterior context, may be ὤπτησαν 'had finished roasting' at *Od.* 3.470. As at the Classical stage (cf. §A.2.13 below), all putative examples of the egressive Aorist are built to accomplishment predicates.

It is possible that there are some examples of egressive Imperfects as well, if, for example, we suppose that when βάλλε has the meaning 'struck' (e.g., at *Il.* 1.52) this refers to the culmination of a more basic meaning of the lemma βάλλω 'shoot so as to hit'. The uncertainty of how to treat this lexical item has prevented me from including the possibility of an egressive Imperfect in Table 8 above.

A.2 Readings of Classical Greek (Table 9)

As stated above, this and the following section will be significantly briefer than the preceding. I restrict my commentary here only to refer the reader to citations of relevant examples to be found in various handbooks. I give explanations only of readings not already met with in Archaic Greek and provide full examples of quoted text only when especially interesting. For full descriptions of the semantics of each category, the reader is referred to the relevant discussion in the preceding section (§A.1), since the same principles discussed for the Archaic period apply, in general, to the Classical and post-Classical periods as well (exceptions to this generalization are noted and discussed below).

A.2.1 STATIVE READINGS

- Stative Aorist?: For a possible stative use in Euripides, see Lloyd 1999: 42. For other possible stative uses ("emotional," "understanding") see id.: 43–44. The supposed example from Soph. *OT* 1023 (ἔστερξεν) is probably not present stative but complexive or inceptive ('loved' or 'came to love'). On the other hand, the two occurrences of ἔστερξε/-αν at Soph. *fr.* 770 and Ar.

Fr. 229 are very likely to have genuine stative interpretation ('she/they love(s)'). We may say, then, that this use, while *attested* in Classical Greek, is moribund at this stage and apparently absent by the post-Classical period.

- Continuous-state Imperfect: Examples abound in this period, for which see Schwyzer–Debrunner: 276 ("stative Imperfect"). These include verbs of the type ἐκείμην 'lay, was lying' (e.g., Hdt. 1.167), ἥμην 'sat, was sitting' (e.g., Eur. *IA* 88), or simply ἦν 'was' (e.g., Ar. *Pl.* 77).

- Stative Perfect: For examples and discussion of this use of the Perfect at the Classical stage, see Wackernagel 1926–1928 [2009]: 215–218; Gildersleeve & Miller 1900: 99–100; Schwyzer–Debrunner: 263–264, 286–287. For the stative Pluperfect, see Wackernagel 1926–1928 [2009]: 238; Schwyzer–Debrunner: 287–288; Gildersleeve & Miller 1900: 103; Smyth 1956: 435. "Continuous-state" examples are as follows: λέλαμπε 'it shines' (Eur. *Andr.* 1026, cited as "intensive" by Gerö & von Stechow (2003: 271) (cf. §A.2.2 below)); ἐσπούδακα 'I am eager' (first in Ar. *Wa.* 694), Attic ἔγνωκα 'I know', ἐντεθύμημαι 'I am considering', νενόμικα 'I believe', δέδια ~ δέδοικα 'I am afraid'; σέσηρε 'grins'. An "attained-state" example arising in the Classical period is μέμηνα 'I am raging' (Wackernagel 1926–1928 [2009]: 217).

A.2.2 Progressive-conative and intensive-frequentative readings

- Conative Aorist?: See Kühner–Gerth: 166–167 on the possibility of a "conative" use of the Aorist, but cf. Schwyzer–Debrunner: 281 for reasons not to suppose such a reading. A putative example is (A27). Examples of this kind are mostly found in drama but occur also in prose, at least until the end of the Classical period. No such use is reported for the Archaic stage, and I have found none, unless perhaps οὐδ᾽ ἔτ᾽ ἔδησαν 'they no longer sought to bind (him)' at *Il.* 1.406 (but cf. §A.1.13 above for the more likely egressive interpretation of this verb).

(A27) Conative Aorist in Classical Greek
ἔκτεινά σ᾽ ὄντα πολέμιον δόμοις ἐμοῖς (Eur. *Ion* 1291).

'I **tried to kill** you because you were an enemy to my house'.

[Progressive Aorist?]: Oddly, there are some examples of the Aorist that seem to meet the description of the progressive reading, as in (A28), where the action of the verb ἐργάσαο is ongoing at speech time and is not stative. This isolated occurrence, which may admit of alternative interpretations, is not considered as a use of the Aorist in this analysis. However, it has been pointed out to me by a reviewer that the denotation of the Aorist in (18) is technically compatible with an interpretation that seems notionally very close to the progressive, namely $t_E \subset t_A \wedge t_E \supset t_0$.[74] This allows for an event to be ongoing (i.e., in progress) at speech time while still being included in an assertion time (which must also include the speech time). Ordinarily, this interpretation is surely blocked by the Present indicative, which is more highly specialized for the progressive use. Yet under certain pragmatic conditions, it seems, the logically possible reading can be realized, as in (A28), where the verb ἐργάσαο must look both backwards and forwards to what is happening 'now' and what has happened 'a little while ago', which may be the reason why this peculiar usage has been licensed.

(A28) Progressive Aorist in Classical Greek?
ὦ βασιλεῦ, ὡς πολλὸν ἀλλήλων κεχωρισμένα **ἐργάσαο**$_{[\text{Aor.}]}$ νῦν τε καὶ ὀλίγῳ πρότε-

74. As I have adopted a fairly standard definition of perfective aspect ($t_E \subseteq t_A$), the allowance of this "progressive-like" configuration is not unique to my analysis, but is tacitly shared by virtually all prior accounts of perfectivity.

ρον· μακαρίσας γὰρ σεωυτὸν δακρύεις[PRES.] (Hdt. 7.46.1).

'O king, what a distance there is between what you **are doing**[AOR.] now and [what you did/were doing] a little while ago! For having declared yourself blessed you are weeping[PRES.]'.

- Progressive-conative Imperfect: The progressive use is taken for granted by most handbooks (e.g., Goodwin 1889: 6–7; Smyth 1956: 423–424, with some Classical examples, including Xen. *Anab.* 1.5.12). Wackernagel (1926–1928 [2009]: 236) provides some brief discussion with specific Classical examples.

  The conative is also a common use of the Imperfect at the Classical stage (Gildersleeve & Miller 1900: 93–94; e.g., Xen. *Cyrop.* 5.5.22). For further examples and discussion see Rijksbaron 2002: 16–17; Smyth 1956: 424–425; Schwyzer–Debrunner: 276; Wackernagel 1926–1928 [2009]: 213; Gildersleeve & Miller 1900: 93–94; Goodwin 1889: 7. Grammars also describe a variant of the conative use, called the "Imperfect of likelihood" (Rijksbaron 2002: 17; Goodwin 1889: 7), referring to eventualities projected to occur in the past but which were never fulfilled or completed, as (e.g.) at Eur. *Med.* 591–592. When negated, the conative Imperfect often conveys resistance, lack of ability, or failure (Gildersleeve & Miller 1900: 95–96, 106), as in οὐ γὰρ ἐώρων ἐν τῇ νυκτί 'for they could not see in the night' (Thuc. 2.3.1). The Present tense may express ability with or without negation (e.g., Plat. *Rep.* 10.598e–599a and 598b).

- Intensive-frequentative Perfect?: This use is essentially restricted to Attic drama after Homer (Wackernagel 1926–1928 [2009]: 215), with some exceptions (and further examples) in Gildersleeve & Miller 1900: 100–101. In drama, however, it is frequent and apparently productive. Examples postdating the Archaic period include κέκλαγγα 'scream, bark' (e.g., Ar. *Wa.* 929) and κέκραγα 'scream, croak'. Gerö & von Stechow (2003: 271) cite λέλαμπε 'it shines, is ablaze' (Eur. *Andr.* 1026) as an example of "the almost extinct 'intensive' use", though this is in fact a stative use (cf. above §A.2.1).

A.2.3 Resultative readings

- Resultative Aorist: This remains a common use of the Aorist throughout the Classical period and beyond, as is typical of the perfective gram type cross-linguistically (cf. Condoravdi & Deo 2014: 261–262). As I show above in Section 5.4, however, the use is of proportionally less frequent occurrence among the Classical authors than in Homer. For examples and discussion in the Greek grammatical literature see Schwyzer–Debrunner: 281–282 ("konfektive"); Wackernagel 1926–1928 [2009]: 227; Gildersleeve & Miller 1900: 107–108; and Delbrück 1879: 107–108, 1897: 280–281.

- Resultative Imperfect?: A possible example of a present-referring resultative Imperfect is to be found at Eur. *El.* 1301: μοῖρά τ᾽ ἀνάγκης **ἦγ᾽** ἢ τὸ χρεών 'The fate of necessity **has led** where it must (lead)'. For the counter-sequential use of the Imperfect, which may be thought of as a past-shifted resultative, see §A.2.7 below.

- Resultative Perfect: E.g., τί δέδρακας 'What have you done?' (Ar. *Fr.* 1472; cf. also Xen. *Anab.* 1.4.8). According to Wackernagel (1926–1928 [2009]: 219), "After Homer, the perfect begins to be used even when the action has an effect in present time not on the subject but on the object." So, the active Pf. δέδωκε 'has given' occurs first in Pindar and is common only later (in Homer is only passive δέδοται 'is/has been assigned' (*Il.* 5.428)). Similarly, Pind. τετίμακεν 'has honored' (*Isthm.* 4.37) but Hom. τετίμηται 'is honored, held in honor' (*Il.* 12.310, *Od. vii.*69). Cf. Gerö & von Stechow 2003 for a detailed analysis of this shift in usage of the Perfect

from the Archaic to the Classical stage. The Pluperfect also shows resultative use in subordinate clauses, which amounts to the "counter-sequential" reading (cf. §A.2.7 below).

A.2.4 Experiential readings

- Experiential Aorist: The experiential use of the Aorist is not uncommon in the Classical period (cf. Gildersleeve & Miller 1900: 108, 112; Smyth 1956: 431–433 ("Empiric(al) Aorist"), with numerous examples), as is to be expected of a perfective gram (cf. Condoravdi & Deo 2014: 261–262). An example is Ar. *Fr.* 1044: ἥντιν᾽. . . πώποτ᾽ **ἐποίησα** 'any woman that I **have** ever yet **created**'.

- Experiential Imperfect: Since, cross-linguistically, experiential usage is available to certain imperfective grams (cf. §A.1.4 above) as well as simple past grams (e.g., the Middle English Preterite (Fischer 1992: 245)), its availability to the Greek Imperfect is not particularly informative as to its gram type. A likely example is Ar. *Fr.* 1043: οὐ. . . **ἐποίουν** πόρνας 'I **have** not [ever] **created** whores'.

- Experiential Perfect: For examples and discussion see Gerö & von Stechow 2003: 272–273, including Lys. 1.43 (πώποτε **γεγένηται** '**has** ever yet **arisen**'), which they say is "purely existential" (i.e., lacking a strictly *experiential* nuance because of its inanimate subject) without being resultative. Note also how Plato prefers the Perfect in experiential function (ἵνα ὑμῶν πολλοὶ **ἀκηκόασι** 'where many of you **have heard**' (*Apol.* 17c)) precisely where Homer prefers the Aorist to the same verb (cf. (A5) above: πολλάκι. . . ἄκουσα 'often I have heard').

A.2.5 Universal readings

- Universal Aorist: As is typical of perfective grams cross-linguistically (cf. Laca 2010: 6–7), the universal reading is extremely marginal in Classical Greek usage of the Aorist—perhaps even more so than at the Archaic stage (cf. §A.1.5 above). Often languages have other strategies for designating the universal perfect reading in the present time, such that the theoretically possible universal interpretation of a language's perfective gram is categorically blocked by those alternatives. Classical Greek is no exception, where the Present or Perfect indicative are preferred to the Aorist in present universal contexts (cf. Smyth 1956: 422–423). Thus, while the denotation of the Aorist at this stage (per (18) above)—as a "Type 1" perfective ($t_E \subseteq t_A$)—strictly *allows* present universal as a use, it is rarely so applied in practice. Note that the increased availability of the Perfect in universal function at the Classical stage (cf. just below) coincides with the greater restriction of the Aorist in this function as compared to the Archaic stage, which is unlikely to be coincidental and probably reflects the pragmatic interaction of the two forms. A likely example is Soph. *El.* 1256: μόλις γὰρ **ἔσχον** νῦν ἐλεύθερον στόμα 'I **have** now hardly **been restraining** my mouth (from being) free' (so Kells 1973: 203, comparing Soph. *Aj.* 995).

- Universal Imperfect: The Imperfect at this stage attests the universal use (Smyth 1956: 424; Gildersleeve & Miller 1900: 97–98 ("unity of time")) with both past and present reference, as at the Archaic stage (cf. §A.1.5 above). Examples with past reference include: Ar. *Fr.* 778 (καθῆστο 'had been sitting') and Hdt. 9.63.2 (ἀγῶνα ἐποιεῦντο 'had been conducting the engagement'). Examples with present reference include: Soph. *El.* 4: οὐπόθεις 'for which you have been longing' and Aesch. *Lib.* 963–964 (πολὺν ἄγαν χρόνον / χαμαιπετὴς **ἔκεισο** δή 'you **have lain/been lying** prostrate for far too much time'). Of course, both of the examples with present reference just cited are built to verbs that lack an Aorist stem, showing once again how the Imperfect, with its "broader" semantic range, can "fill in" for a paradigmati-

cally lacking Aorist. Still, it is striking that the Present is not used in such cases.

- Universal Perfect: As Gerö & von Stechow (2003: 273–274) show, the use of the Perfect in present universal function is "garden variety" at the Classical stage (cf. also Smyth 1956: 423 and Gildersleeve & Miller 1900: 87 "unity of time"). Besides their citations (from Plato), an example is Eur. *El.* 568: πάλαι **δέδορκα** 'I **have been looking** for a long time' (cf. similarly Ar. *Thesm.* 745, Aeschin. 2.147). As mentioned just above, the greater frequency at which the Perfect is applied in universal function at the Classical stage as compared to the Archaic stage probably contributes to the further restriction of the Aorist in universal function at this time by means of pragmatic blocking. The Pluperfect is also used in universal function when referring to past time, of the type 'had been doing X' (e.g., Xen. *Anab.* 7.5.8; see further examples in Smyth 1956: 424 and Gildersleeve & Miller 1900: 114).

A.2.6 Concentrative readings

- Concentrative-sequential Aorist: See Rijksbaron 2002: 13 and cf. n.25 above. Examples in sequential narration are given above in (12) in Section 5.2. Of course, the concentrative value of the Aorist need not occur in sequential narration (e.g., Ar. *Fr.* 1469) and is not mutually exclusive with other readings of the Aorist, such as inceptive (e.g., Ar. *Fr.* 1022).

- Concentrative-sequential Imperfect: This use of the Imperfect is largely but by no means entirely restricted to verbs of 'sending, motion, saying, and exhorting' (Kühner–Gerth: 143–144). Examples have already been given above in (11) and (12), the latter of which shows a mixture of Imperfects and Aorists in sequential narration. For discussion and further examples see Emde Boas et al. 2019: 429; Rijksbaron 2002: 11–14, 18–19; Smyth 1956: 427; Wackernagel 1926–1928 [2009]: 233–236; Goodwin 1889: 8.

- Concentrative[-sequential?] Perfect: Non-sequential concentrative uses of the Perfect are fairly common at this stage (e.g., Hdt. 4.7.1). Clear sequential uses are lacking (perhaps at Lys. 1.7 (or counter-sequential?)). See Gerö & von Stechow 2003 on this development, and cf. Gildersleeve & Miller 1900: 101 and Smyth 1956: 435 ("dated past action"), citing Dem. 21.7: **προπεπηλάκισται** τὸ σῶμα τοὐμὸν τότε 'my body **got defiled** at that time'. Despite Smyth's (1956: 435) label, an overt temporal adverbial like τότε 'then' is not required for this usage (cf., e.g., Ar. *Fr.* 1023–1024, 1469–1471).

A.2.7 Counter-sequential readings

- Counter-sequential Aorist: See, with copious examples, Smyth 1956: 433–434; Rijksbaron 2002: 20; Gildersleeve & Miller 1900: 109; Delbrück 1879: 106–107 (among others). The Aorist remains regular in anterior contexts, in strong preference to the Imperfect and Perfect.

- Counter-sequential Imperfect: See Kühner–Gerth: 145; Schwyzer–Debrunner: 276; Gildersleeve & Miller 1900: 98; Smyth 1956: 426. An example can be found in (11) above: γὰρ. . . ἀπίεσαν 'for they had shot out' (cf. also Lys. 2.7 and Antiph. 5.29). The examples which Smyth (1956: 426) classes under "Imperfect for Pluperfect" I regard as "continuous state" (cf. §A.2.1 above).

- Counter-sequential Perfect: The Perfect is found in this use in subordinate clauses denoting action antecedent to the main verb (Smyth 1956: 435), which may be either present or past referring, as in Men. *fr.* 598, which is ambiguous between past and present time reference: ἅ σοι τύχη **κέχρηκε**$_{[\text{PF.}]}$, ταῦτ᾽ ἀφείλετο$_{[\text{AOR.}]}$ 'What things Fortune **had/has lent**$_{[\text{PF.}]}$ to you, she took/has taken back$_{[\text{AOR.}]}$'. The Pluperfect may also express past anteriority, albeit rarely

(cf. Rijksbaron 2002: 77; Smyth 1956: 435; Gildersleeve & Miller 1900: 109), as at Hdt. 9.33.1: ὡς. . . πάντες οἱ **ἐτετάχατο** ‘When they all **had been arrayed**’.

A.2.8 Inceptive readings

- Inceptive Aorist: See Section A.1.8 above for references. In contrast to its relative scarcity in Homer (Wackernagel 1926–1928 [2009]: 224; Jacobsohn 1933: 308–309), by the Classical period the Aorist is plainly the preferred means of expressing the inceptive to state predicates (Rijksbaron 2002: 20–21), which I take to be a reflection of its fully grammaticalized perfective denotation (cf. (18) above). An example is Ar. *Fr.* 1022: ὃ θεασάμενος πᾶς ἄν τις ἀνὴρ **ἠράσθη** δάιος εἶναι ‘Everyone who saw (that play) **fell in love** with being fierce’.

- Inceptive Imperfect: See, e.g., Smyth 1956: 426. Like the Aorist, the Classical Imperfect is quite common in the inceptive function (despite Schwyzer–Debrunner: 277; cf. Hollenbaugh 2020b for arguments in favor of this reading of the Imperfect). As in Homer, however, the Imperfect in this use may be built to any predicate type (except, perhaps, achievements), whereas the Aorist is built to state predicates only. An example is Thuc. 2.12.3: τοσόνδε εἰπὼν **ἐπορεύετο** ‘Having said this, he **set out**’.

- Inceptive Perfect: Cf. Smyth’s (1956: 435) “Pluperfect of Immediate Occurrence.” A likely example is Plat. *Ion* 536b: εὐθὺς **ἐγρήγορας** ‘at once you **are awakened/wake up**’. Note that in Homer this same Perfect is used only *statively*: e.g., ἐγρηγόρθασι ‘they lie awake’ (*Il.* 10.419). Seeing as there are apparently no examples of inceptive Perfects at the Archaic stage (cf. §A.1.8 above), I take the inceptive use of the Perfect to be an innovation of Classical Greek.

A.2.9 Complexive readings

- Complexive Aorist: Like the inceptive Aorist, most complexive examples appear to be made with sigmatic Aorists and are invariably built to state predicates (cf. Basset 2009: 214). See Schwyzer–Debrunner: 281; Smyth 1956: 430–431 (though some of his examples are concentrative); Gildersleeve & Miller 1900: 106. Given its scarcity at the Archaic stage (cf. above §A.1.9), the regular use of the Aorist with complexive interpretation to state predicates at the Classical stage amounts to an innovation, being a more pronounced change than that observed for the inceptive use (cf. §A.1.8 and §A.2.8 above). This innovation of usage has been detailed in Sections 5.4–5.5 above and is reflected in the denotations given for the Aorist in (17) and (18) in Section 6.1.1, showing a shift from “emergent perfective” (which virtually excludes complexive as a use) to Type 1 perfective, which freely permits the complexive interpretation. Examples have been given above in (5) and (9).

- Complexive Imperfect: Unlike the Aorist, which attests complexives only to state predicates, the complexive Imperfect is built to all predicate types, though with an apparent preference for activity predicates (cf. Basset 2009; Wackernagel 1926–1928 [2009]: 234; Gildersleeve & Miller 1900: 90–91; and above n.24 and §A.1.9). There is no fundamental change in usage from the Archaic to the Classical complexive Imperfect, as it is regular at both stages. However, since the Aorist has become regular in this function for state predicates in Classical Greek, it partially blocks the application of the Imperfect in such cases, thereby contributing to the Imperfect’s gradual restriction to “imperfective-like” uses, as described in detail above (§§5.4–5.5). Examples for this stage are provided above in (5) and (10).

- Complexive Pluperfect: As in Archaic Greek, the Perfect with definite temporal boundaries typically has a universal perfect interpretation, continuing up to the moment of utterance (cf. above §A.2.5). However, again like Archaic Greek, the Pluperfect is just as well suited to

complexive interpretation as is the Imperfect (cf. Smyth 1956: 435). An example is Ar. *Pl.* 743–744: τὴν νύχθ᾽ ὅλην / **ἐγρηγόρεσαν** 'the whole night they **lay awake**'.

A.2.10 COUNTERFACTUAL READINGS

- Past(/present) counterfactual Aorist: As in Archaic Greek, the Aorist in counterfactual conditions refers to past time (Goodwin 1889: 93–95; Smyth 1956: 518–520) (e.g., Dem. 18.243). However, on rare occasions (in Attic drama) the Aorist can be used in reference to the present time (Gildersleeve & Miller 1900: 169), which I take to be the counterfactual counterpart of the "dramatic" Aorist (cf. §A.2.11 below) (e.g., Ar. *Kn.* 1276–1277).

- Present/past counterfactual Imperfect: See Goodwin 1889: 94; Gildersleeve & Miller 1900: 169; Smyth 1956: 518–520. At the Classical stage, in contrast to Archaic Greek, the Imperfect regularly refers to *present* time (e.g., Xen. *Cyrop.* 1.2.16). However, it occasionally still refers to past time as well. It is said that the counterfactual Imperfect may have past reference at this stage only when it refers to "continued or repeated action" (including conative). While the majority of examples certainly support this claim, the counterfactual Imperfect still occasionally shows simple concentrative interpretations, just like those found in Homer (e.g., Xen. *Mem.* 1.1.5) (cf. §A.1.10 above). This is accounted for *only* if the Imperfect at the Classical stage was still semantically a simple past gram—even if it is by this time more often used in functions associated with imperfectives—such that $t_E \circ t_A$, thus allowing the possibility for eventuality time to be properly contained in assertion time (concentrative), which the stricter imperfective aspect would theoretically rule out.

- Present/past counterfactual Pluperfect: See Gildersleeve & Miller 1900: 169 and Smyth 1956: 519–520. The Pluperfect in contrary-to-fact or unreal conditions typically refers, like the Imperfect at this stage, to the *present* time (e.g., Plat. *Gorg.* 453d), though, again like the Imperfect, it can also refer to the past (e.g., Antiph. 4.2.3). A look at Cunliffe's (2012: 432, 437–438) "Table of the Uses of εἰ (αἰ), ἤν" confirms that the use of the Pluperfect for present counterfactuality is post-Homeric, the only counterfactual Pluperfect occurrences in Homer referring to *past* time (cf. §A.1.10 above).

A.2.11 PERFORMATIVE/REPORTIVE READINGS

In contrast to the Archaic stage, the performative or reportive use is by Classical times a fully developed, regular function of the Aorist indicative, especially frequent in—but not exclusive to—Attic drama (see, with examples, Kühner–Gerth: 163–165; Gildersleeve & Miller 1900: 113; Smyth 1956: 432). Of course, the Present indicative remains available in these functions as well (the so-called "aoristic" Present, cf. Smyth 1956: 414). Full discussion of the performative and reportive has already been presented in Section A.1.11 above. A Classical example is in (7) above.

A.2.12 FUTURATE READINGS

- Futurate Aorist: On the futurate interpretation, see §A.1.12. The Classical usage is exemplified in (8) above. At this stage, the verb ὄλλυμαι 'be lost, perish' continues to show futurate usage (e.g., Eur. *Alc.* 386), as it had already in Homer (cf. (A24) above), but now the futurate interpretation is not uncommon among a variety of other lexical items as well, and may be found in either a subordinate or a main clause, whether conveying strict anteriority (as in (8)) or not. As Wackernagel (1926–1928 [2009]: 228–229) discusses, despite a handful of Homeric examples, the futurate use of the Aorist really takes off in the Classical period. Its unrestricted occurrence in the Classical language amounts to a functional innovation from the Archaic stage, where examples had been isolated and highly restricted (cf. §A.1.12 above). This is expected

under the "weaker" semantics assigned to the Aorist at the Classical stage (cf. (18) above), which readily allows for assertion time to follow evaluation time (i.e., the standard definition of future tense). For further discussion and examples from Classical Greek see Kühner–Gerth: 166–167; Gildersleeve & Miller 1900: 114; Schwyzer–Debrunner: 281–283; Smyth 1956: 432.

- Futurate Perfect: See, with numerous Classical examples, Kühner–Gerth: 150; Gildersleeve & Miller 1900: 101; Smyth 1956: 435; Rijksbaron 2002: 37. This is again a functional innovation from the Archaic stage (cf. §A.1.12 above). As with the futurate Aorist, the futurate Perfect is virtually always found in conditional sentences (e.g., Xen. *Anab.* 1.8.12).

A.2.13 Egressive Aorist: For an explanation of this reading see Section A.1.13 above. As in the Archaic stage, the egressive Aorist is in Classical Greek built only to accomplishment predicates. A Classical Greek example has been cited above in (26) (cf. also Eur. *El.* 824).

A.3 Readings of post-Classical Greek, with notes on Medieval and Modern Greek (Table 10)

Even more so than in the preceding section on the Classical period, I limit my remarks here only to verifying the attestation of a given reading at this stage of the language, either by referencing a standard handbook on post-Classical Greek containing textual citations or by citing a post-Classical text directly. As before, I attempt to give some idea of the extent to which a particular reading may be considered regular or not for each form, insofar as this can be determined, and whether there has been a significant innovation from the previous stage. Where possible, I provide brief notes on the developments of Medieval and Modern Greek as well, except as regards the Perfect, which does not survive as such beyond the post-Classical stage.

Most handbook references in this section are to *BDF* and, hence, most textual citations are to the *New Testament*. This is more for the sake of convenience of reference than for lack of supporting materials in other sources, due in no small part to *BDF*'s incomparably excellent treatment of aspectual usage for a text that falls so squarely within the post-Classical period. Yet nothing in this section should be understood as a uniquely *New Testament* phenomenon, and examples from numerous other post-Classical texts could in most cases easily be quoted. Recall from the "Methodology" section (§4) that the aim here is simply to verify that a particular function of a given form is *operative* at the stage in question, not to list exhaustively which texts and authors belonging to that stage do and do not attest each usage.

A.3.1 Stative readings

- [Stative Aorist?]: A possible occurrence of the stative reading of the Aorist at this stage is (15a) above, though this is more likely universal. Another is Mk. 3:21, if we read ἐξέστη, with most English translations, as something like 'He is out of his mind' or 'He is beside himself'. Note, though, that this would be an "attained state," which differs from the Archaic stative usage of the Aorist (cf. §A.1.1 above) and resembles more closely Modern Greek usage (e.g., πείνασα 'I've gotten hungry, I am hungry'; cf. Thumb 1912: 123 and Schwyzer–Debrunner: 282). A similar example is the Paschal Greeting Χριστὸς ἀνέστη, which if it really means 'He is risen' represents an attained state; but if, as seems more likely, this traditional translation is a mere archaism of English grammar, it is simply another example of the resultative reading of the Aorist, to be understood as 'He *has* risen' (cf. below §A.3.3). In its *New Testament* attestations, ἀνέστη has only resultative (e.g., Lk. 9:19), counter-sequential (e.g., Lk. 9:8), and concentrative (e.g., Mk. 9:27, Acts 9:34) functions.[75] A stative Aorist with *past* reference is plausibly found at

75. Note that the Perfect ἐγήγερται, which might be expected to mean 'He is risen' is only used in resultative (e.g., Mk. 6:14) and concentrative (e.g., 1 Cor. 15:4) functions in the *New Testament* (the latter having its assertion time overtly specified by the adverbial phrase τῇ ἡμέρᾳ τῇ τρίτῃ 'on the third day'; cf. below §A.3.6). The Aorist passive ἠγέρθη 'is/has been raised' is

Jn. 9:18, though it could be complexive here (cf. §A.3.9 below).

- Continuous-state Imperfect: For examples of this very common reading (e.g., Jn. 11:35–36, Lk. 1:22), including (as ever) words like ἦν 'was', see *BDF*: 169. This reading unsurprisingly persists into Medieval (*CGMG*: 1934–1935) and Modern Greek (Thumb 1912: 121) as well.

- Stative Perfect: The "attained state" variety of the stative Perfect (cf. above §A.1.1) is not uncommon in Hellenistic literature, as in διέφθορα 'I am ruined' (e.g., Luc. *Sol.* 3), which is intransitive in Homer, Ionic, and Hellenistic prose but in Attic (drama) only transitive 'I have ruined' (Wackernagel 1926–1928 [2009]: 217). For further discussion and examples see *BDF*: 176. The "continuous state" variety seems to be lacking for this period, unless μέμνημαι 'I remember' belongs here (e.g., 1 Cor. 11:2). On the Pluperfect see *BDF*: 177–178.

A.3.2 Progressive-conative readings

- Progressive-conative Imperfect: For discussion of both the progressive (e.g., Acts 19:32) and the conative (e.g., Acts 7:26) interpretations, with abundant examples of each, see *BDF*: 169. These continue also in Medieval (*CGMG*: 1934–1935) and Modern Greek (Thumb 1912: 121–122).

- [Intensive-frequentative Perfect]: Gerö & von Stechow (2003: 281–283) conclude that "[i]n the Greek of this period the intensive meaning of the Perfect is completely lost."

A.3.3 Resultative readings

- Resultative Aorist: Despite its decline in frequency since the Archaic stage (cf. §5.4 above), the resultative use of the Aorist is, of course, still alive and well in the post-Classical period, as we should expect for a perfective gram, whose use in resultative function is typologically robust (cf. Condoravdi & Deo 2014: 261–262). Numerous resultative Aorists are found in the *New Testament*, with or without νῦν 'now' (e.g., Mt. 26:65–66, Mk. 15.34). The use continues in Medieval (*CGMG*: 1936; Joseph 2000: 324) and Modern Greek (Thumb 1912: 123; Schwyzer–Debrunner: 282).

- Resultative Perfect: See *BDF*: 176, with many examples both intransitive and transitive (e.g., Jn. 19:22). Cf. also Gerö & von Stechow 2003: 281–283 (citing Mt. 2:20) for discussion and diachronic semantic analysis. As the Perfect was, more and more, used *transitively* beginning in the Classical period, the application of the Aorist in resultative contexts naturally became increasingly restricted, until by the post-Classical period the Perfect predominates in resultative function, both in relation to the usage of the Aorist and in relation to the Perfect's own alternative functions (such as stative) that had formerly been so common. This lasts until the Perfect is lost in the Medieval period and a resurgence of the Aorist in resultative and other perfect-like functions is seen (*CGMG*: 1937; Joseph 2000: 324). For the Pluperfect cf. §A.3.7 below.

A.3.4 Experiential readings

- Experiential Aorist: Like the resultative Aorist (cf. §A.3.3 just above), the experiential reading is reasonably well attested (e.g., Mt. 5:28) but, as ever, is strongly dispreferred in favor of the experiential Perfect. The Aorist occurs beside the Perfect in experiential function at Jn. 3:32. This speaks to the competition between the two tenses at this stage, which were both now, typologically speaking, perfective grams and, accordingly, overlap in many of their functions,

consistently used in reference to Jesus' resurrection from the dead (e.g., Mt. 27:64).

including experiential perfect use. The use persists in Medieval Greek (*CGMG*: 1936), but in Modern Greek it seems that the periphrastic Perfect is preferred (required?) in this function (Thumb 1912: 162).

- Experiential Perfect: As at earlier stages of the language, the Perfect seems to be the preferred means of expressing the experiential reading, which is especially clear with verbs of perception, as at Jn. 5:37 and Mk. 2:12 (cf. *BDF*: 176 for further examples). At Jn. 3:32 the Perfect and Aorist occur side by side in experiential function. Cf. discussion and diachronic semantic analysis in Gerö & von Stechow 2003: 281 (citing Jn. 1:18). For the Pluperfect cf. §A.3.7 below.

A.3.5 Universal readings

- Universal Aorist: Examples of universal readings of the Koine Aorist, with both present and past reference, have been given above in (15) (cf. similarly Deu. 9:24). However, this use seems not to continue into Medieval or Modern Greek, where the Present alone is so used (cf. Iatridou et al. 2003: 171).

- Past universal Imperfect: Examples of the universal interpretation of the Imperfect with *past* reference include Lk. 5:25, Mk. 6:17–19, and Mt. 14:4. The Imperfect continues to be regular in past universal function into Modern Greek (being the past-tense equivalent of the universal Present). The *present* universal function documented for the earlier stages of the language (cf. §A.1.5 and §A.2.5 above) appears to be unattested in the post-Classical period (where the Present indicative is uniformly favored, as in Modern Greek).

- Universal Perfect: Gerö & von Stechow (2003: 281–283) claim that the Perfect at this stage has "an Extended-Now-meaning" as its "core meaning." Examples include Mt. 20:6 and Deu. 13:6, where the verbs ἕστηκα and οἶδα have not their stative interpretations (cf. §A.1.1 above) found at earlier stages (respectively, 'be standing' and 'know') but universal ones (respectively, 'have been standing' and 'have known'). This amounts to an innovation in the usage of such Perfects. The Pluperfect is attested in *past* universal function (e.g., Jn. 6:64, Job 42:11, Deu. 32:17).

A.3.6 Concentrative readings

- Concentrative-sequential Aorist: The Aorist, of course, continues to have concentrative-sequential as a use throughout the post-Classical period (cf. *BDF*: 166, 171, where concentrative examples are grouped with what I consider complexive uses). This use remains regular in the Medieval (*CGMG*: 1935–1936) and Modern (Thumb 1912: 122–123) periods.

- Concentrative[-sequential] Imperfect?: This use is discussed in Section 5.3 above, with references and citations (cf. *BDF*: 177), including an example in (13) (cf. also Jn. 11:35–36 and Lk. 4:1). What emerges clearly is that the concentrative use of the Imperfect, especially in sequential narration, is at the post-Classical stage far more restricted—both lexically and syntactically—than it had been at the Classical and Archaic stages. A similar usage exists in Modern Greek, called the "narrative Imperfect," which, however, is lexically and syntactically restricted to an even greater extent than the post-Classical usage (cf. Hedin 2000: 255–256, 262–263).

- Concentrative-sequential Perfect: On this much discussed use of the Koine Perfect see especially Wackernagel 1926–1928 [2009]: 219–220; Schwyzer–Debrunner: 287–288; *BDF*: 177 ("Perfect for the aorist," with many examples and further references); Browning 1983: 30 (on

the formal and functional merger of the Perfect and Aorist beginning in this stage and completed in the Medieval period). See Gerö & von Stechow 2003: 281–283 for a diachronic semantic account (citing Acts 7:35). In some instances the Aorist and Perfect occur side by side in the same, concentrative-sequential function (cf. Gerö & von Stechow 2003: 282–283), as at Rev. 5:7 and 1 Cor. 15:3–5 (cf. n.75 above).

Concentrative-sequential Pluperfect: Remarkably, Wackernagel (1926–1928 [2009]: 239) describes "the Hellenistic use of the pluperfect simply as an indeterminate past tense, in contexts where we would expect an aorist," and a "similar use of the pluperfect as a simple past tense by writers of the imperial period." It seems that the Pluperfect, while it survived, largely lost its specially counter-sequential force (but cf. §A.3.7 just below) and could be used in concentrative contexts as well, not unlike the Aorist and plain Perfect (cf. *BDF*: 177–178). This usage resembles that of the Archaic period (cf. above §A.1.6).

A.3.7 COUNTER-SEQUENTIAL READINGS

- Counter-sequential Aorist: See *BDF*: 169, 177–178. The Aorist in such contexts can have either a resultative (e.g., Mk. 12:12) or an experiential nuance (e.g., Rev. 22:8) and may occur in main clauses (e.g., Deu. 9:25) as well as dependent ones. The usage persists in Medieval (*CGMG*: 1937) and Modern Greek (Thumb 1912: 192–194).

- Counter-sequential Imperfect: See *BDF*: 170–171. At this stage, the use is practically restricted to ἦν 'was, had been', which lacks an Aorist or Perfect stem in its paradigm. Examples containing verbs other than ἦν include Acts. 16:3 (ὑπῆρχεν 'had been') and Mk. 12:44 (εἶχεν 'had possessed'). This usage persists in Medieval (*CGMG*: 1935) and Modern Greek (Thumb 1912: 192–194).

- Counter-sequential Perfect: For this use of the Perfect (e.g., Mk. 5:33) see *BDF*: 177; for the same use of the Pluperfect (e.g., Acts 19:32) see *BDF*: 177–178.

A.3.8 INCEPTIVE READINGS

- Inceptive Aorist: See *BDF*: 171. At this stage, according to Purdie (1898), the simplex Aorist is rare in inceptive function, having been largely taken over by prefixed forms of the Aorist (cf. discussion in §5.3 above and *BDF*: 166). An example of this kind is Jn. 9:18, containing the prefixed Aorist ἀν-έβλεψεν 'received sight'. Still, non-prefixed examples are occasionally met with (e.g., Jn. 11:35–36, ?Jdg. 3:10). The usage persists in Medieval (*CGMG*: 1936) and Modern Greek (Thumb 1912: 122–123).

- Inceptive Imperfect: The inceptive is an extremely common use of the Imperfect in this period (e.g., Mt. 5:1–2). See Wallace 2006, with copious examples and references, and *BDF*: 169 (under "conative"). The usage persists into Medieval (*CGMG*: 1935) and Modern Greek (Hedin 2000: 250–252; Robertson 1923: 885).

- Inceptive Perfect: There are a number of Perfects and Pluperfects that have not their stative-resultative value found at the earlier stages but a past inceptive interpretation (e.g., Heb. 1:3, 12:2), essentially equivalent to the Aorist or Imperfect in this function (cf. *BDF*: 176).

A.3.9 COMPLEXIVE READINGS

- Complexive Aorist: See *BDF*: 171. Examples have been given above in (16). As opposed to the Archaic and Classical periods, the Aorist at this stage is used both for states (16a) and events ((16b)–(16d)) in complexive value. In all, the Aorist is overwhelmingly preferred to the Imperfect in this function (cf. just below), in stark contrast to the earlier stages of the language (recall that in Archaic Greek (§A.1.9) the Imperfect is strongly preferred in complexive contexts, and in Classical Greek (§A.2.9) the Imperfect is regular for complexives to non-state predicates). The usage persists in Medieval (*CGMG*: 1936) and Modern Greek (Thumb 1912: 122; Seiler 1952: 75).

- Complexive Imperfect: The only secure examples of a complexive Imperfect so far observed for post-Classical Greek are to the verb εἰμί 'be' (e.g., (14a) above; cf. also Acts 9:9, 28:7, and Ex. 24:18), which of course lacks an Aorist stem. A likely exception is (14b) above (cf. also Acts 16:18 and ?Lk. 4:1). Further, I cannot document this use in Medieval or Modern Greek, where the Aorist is regular in such contexts. I therefore conclude that the complexive use of the Imperfect was moribund in post-Classical Greek, being pragmatically dispreferred in favor of the Aorist in this function, a handful of lexical exceptions notwithstanding. For a summary of

the change in usage of the Imperfect relative to the Aorist in this function over time see Table 11 in Section 5.3 above.

- Complexive Pluperfect: The Pluperfect, like the Imperfect, occasionally shows complexive as a use, while at the same time being counter-sequential (cf. §A.3.7 above), as at Deu. 10:10.

A.3.10 COUNTERFACTUAL READINGS

There are essentially no noteworthy developments in counterfactual usage as regards tense–aspect at this stage. Interestingly, however, ἄν is no longer required in the apodosis of a conditional sentence (*BDF*: 182, with examples). Examples of the counterfactual Aorist include Mt. 12:7, 24:43, and Lk. 19:23. As at the Classical stage, the Imperfect and Pluperfect remain "temporally ambiguous." The Imperfect with past reference is seen at Heb. 11:15; with present reference at Lk. 7:39 and Jn. 18:36. The Pluperfect with past reference is found at Acts 26:32 and 1 Jn. 2:19; with present reference at Jn. 8:19 and 14:7.

A.3.11 PERFORMATIVE/REPORTIVE READINGS

The performative/reportive Aorist appears not to continue into the post-Classical period. The *Present*, of course, is still used in performative and reportive sentences (e.g., Acts 25:11; cf. *BDF*: 167), as at all stages of Greek.

A.3.12 FUTURATE READINGS

- Futurate Aorist: See *BDF*: 171–172. Both types of futurate Aorist uses occur at this stage, as in Classical Greek—namely the "simple future" (e.g., Jn. 15:8, Mk. 11:24) and the "future perfect" (e.g., Mt. 18:15) varieties discussed above in Sections A.1.12 and A.2.12. The use (in both varieties) continues in Modern Greek (Seiler 1952: 67; Schwyzer–Debrunner: 282; Thumb 1912: 123).

- Futurate Perfect?: See *BDF* (177), noting that the *New Testament* usage is rare and differs somewhat from that of the Classical language (e.g., 1 Jn. 2:5, Ja. 2:10), in that the *New Testament* examples seem always to occur in the apodoses of generalizing sentences (type 'whoever does X'), whereas Classical usage involves *particular* future events that are anterior to another future event. The post-Classical usage thus resembles the "gnomic" function of the Perfect described in *BDF*: 177 (cf. also Wackernagel 1926–1928 [2009]: 230, citing Ja. 1:24, and Schwyzer–Debrunner: 285, 287), from which it perhaps ought not to be distinguished (hence my "?"). It is unclear how the difference between Classical and post-Classical usage is to be understood in this respect, and to what extent it reflects grammatical change.

A.3.13 [Egressive Aorist?]: This use is, according to Purdie (1898), available only to the prefixed Aorists (cf. *BDF*: 166) and seems not to be attested for the simplex Aorist at this stage. It appears to be unavailable in Medieval and Modern Greek (cf. n.60 above), except to prefixed forms of the Aorist (cf. Thumb 1912: 123).

Nomenclature and technical abbreviations

fr. fragment

$\mathbf{t_A}$ assertion time: the interval about which some claim is made (i.e., asserted), with respect to which the runtime of the eventuality is said to hold and may be assessed as either true or false.

t_0 evaluation time (or time of local evaluation): the point or interval of perspective from which a state of affairs is "evaluated" as to its truth or falsity and the location of its temporal parameters (t_E, t_A, or t_S) in time relative to one another. These temporal parameters may be situated prior to, at, or after the contextually salient evaluation time. In the default case, speech time (t_S) and evaluation time coincide, but the evaluation time may be past or future "shifted" in certain syntactic or discourse contexts (see n.42).

t_E eventuality time: the interval at which the eventuality (state or event) expressed by a verb holds true.

t_S speech time (or time of utterance): the point or interval at which the speech act takes place (typically the "now" of the present moment). This may be thought of as a special case of evaluation time (t_0). Where this term is used (rather than t_0 or $t_{0/S}$) it is intended that evaluation times other than speech time not be considered.

$t_{0/S}$ speech time or any other contextually salient evaluation time: This refers to the evaluation time (t_0), whether it coincides with speech time (t_S) or not. Technically speaking, it is not distinct from simple t_0. It is used in this paper only for the sake of clarity and ease of exposition, particularly in contexts where the default case of speech time is most intuitive but I do not wish to rule out the possibility of past or future shifting (as the term t_S would do).

accomp. accomplishments, referring to an eventive situation or predicate type consisting of a preparatory phase and a culmination, such as *come* or *paint a picture*.

achiev. achievements, referring to an eventive situation or predicate type consisting of a culmination only, such as *arrive* or *fall asleep*.

Aor. Aorist (indicative unless otherwise stated): the name of a functional category in Greek

CF counterfactual or contrary-to-fact use

conc. concentrative reading: the eventuality is characterized as complete in the past with respect to an assertion time interval (t_A) that fully contains (properly includes) the runtime of the eventuality (t_E), as determined by the local syntactic or discourse context.

cplxv. complexive reading: the eventuality is characterized as complete in the past with respect to an assertion time interval (t_A) that is coextensive with the runtime of the eventuality (t_E), as determined by the local syntactic or discourse context.

ex. example from

frequ. frequent in occurrence: referring to a reading or set of readings that is *commonly attested* in association with a particular morphological category at a given linguistic stage. Frequency presupposes regularity and indicates that a form is relatively free of pragmatic interaction with other forms in the verbal system (blocking) in a particular usage.

Fut. Future indicative: the name of a functional category in Greek

ind. indicative mood (Greek)

inf. infinitive (Greek)

Ipf. Imperfect indicative: the name of a functional category in Greek

Ipfv. Imperfective: the common English name of the imperfective grams in Russian and Arabic (among others)

ipfv. imperfective (aspect, gram type, or gram)

non-transfm. non-transformative, referring to the natural class of "unbounded" situation types (i.e., those without an inherent endpoint), namely states and activities.

Pf. Perfect (indicative unless otherwise stated): the name of a functional category in Greek

pf. "perfect-like" uses—namely the resultative, experiential, stative, and (in some cases) universal readings—are available to a particular form at a given linguistic stage.

Pfv. Perfective: the common English name of the perfective grams in Russian and Arabic (among others)

pfv. perfective (aspect, gram type, or gram)

Plpf. Pluperfect indicative: the name of a functional category in Greek

Pres. Present indicative: the name of a functional category in Greek

reg. regular: referring to a reading or set of readings that is *compatible with the denotation* of a particular morphological category at a given linguistic stage. Regularity does not necessarily imply frequency of occurrence, as a form can be blocked by other forms in the verbal system preferred in certain contexts for a variety of reasons.

sequ. sequential function: states of affairs characterized as complete in the past are sequenced in narration relative to one or more other complete states of affairs within the local discourse context.

tr. translation by

transfm. transformative, referring to the natural class of "bounded" situation types (i.e., those with an inherent endpoint), namely achievements and accomplishments.

Abbreviations of authors and texts

Aj. *Ajax* of Soph.

Alc. *Alcestis* of Eur.

Anab. *Anabasis* of Xen.

Andr. *Andromache* of Eur.

Apol. *Apology* of Plat.

Cyrop. *Cyropaedia* of Xen.

El. *Electra* of Soph.

El. *Electra* of Eur.

Fr. *Frogs* of Ar.

Gorg. *Gorgias* of Plat.

HH *Homeric Hymns* (Archaic)

Hell. *Hellenica* of Xen.

IA *Iphigenia in Aulis* of Eur.

Il. *Iliad* of Hom.

Ion *Ion* of Plat.

Kn. *Knights* of Ar.

Lib. *Libation Bearers* of Aesch.

Med. *Medea* of Eur.

Mem. *Memorabilia* of Xen.

OT *Oedipus Tyrannus* of Soph.

Od. *Odyssey* of Hom.

Or. *Orestes* of Eur.

Pl. *Plutus* of Ar.

Rep. *Republic* of Plat.

SH *Shield of Heracles* of Ps.-Hes.

Sol. *The Solecist* of Luc.

Thesm. *Thesmophoriazusae* of Ar.

Th. *Theogony* of Hes.

WD *Works and Days* of Hes.

Wa. *Wasps* of Ar.

1 Cor. Book of 1 Corinthians in NT

1 Jn. Book of 1 John in NT

1 Kings Book of 1 Kings in LXX

2 Chron. Book of 2 Chronicles in LXX

Acts Book of the Acts of the Apostles in NT

Aesch. Aeschylus (Classical, drama)

Aeschin. Aeschines, *Speeches* (Classical)

Antiph. Antiphon, *Speeches* (Classical)

Ar. Aristophanes (Classical, drama)

Dem. Demosthenes, *Speeches* (Classical)

Deu. Book of Deuteronomy in LXX

Eur. Euripides (Classical, drama)

Ex. Book of Exodus in LXX

Ezk. Book of Ezekiel in LXX

Ezr. Book of Ezra in LXX

Gen. Book of Genesis in LXX

Hdt. Herodotus, *Histories* (Classical)

Heb. Book of Hebrews in NT

Hes. Hesiod (Archaic)

Hom. Homer (Archaic)

Isthm. *Isthmean Odes* of Pind.

Ja. Book of James in NT

Jdg. Book of Judges in LXX

Jn. Book of John in NT

Job Book of Job in LXX

Lk. Book of Luke in NT

Luc. Lucian (post-Classical/Hellenistic)

LXX *Septuagint* (post-Classical Koine)

Lys. Lysias, *Speeches* (Classical)

Men. Menander (Classical)

Mk. Book of Mark in NT

Mt. Book of Matthew in NT

Neh. Book of Nehemiah in LXX

NT Greek *New Testament* (post-Classical Koine)

Pind. Pindar, *Odes* (late Archaic)

Plat. Plato (Classical)

Plb. Polybius, *Histories* (post-Classical/Hellenistic)

Plut. Plutarch (post-Classical/Hellenistic)

Ps. Book of Psalms in LXX

Ps.-Hes. Pseudo-Hesiod (Archaic)

Rev. Book of Revelation in NT

Sapph. Sappho (late Archaic, lyric)

Soph. Sophocles (Classical, drama)

Theog. Theognis of Megara (late Archaic, lyric)

Thuc. Thucydides, *The Peloponnesian War* (Classical)

Xen. Xenophon (Classical)

Abbreviations of references

BDF	*See* Blass, Friedrich, Albert Debrunner, & Robert W. Funk. 1961.
CGMG	*See* Holton, David, Geoffrey Horrocks, Marjolijne Janssen, Io Manolessou, & Notis Toufexis. 2019.
Kühner–Gerth	*See* Kühner, Raphael, & Bernhard Gerth. 1898.
Perseus under PhiloLogic	*See* Dik, Helma, ed. 2018.
Schwyzer–Debrunner	*See* Schwyzer, Eduard, & Albert Debrunner. 1950.
TLG	*See* Pantelia, Maria C., ed. 2001—.

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