

CASE ALTERNATIONS IN ANCIENT GREEK PASSIVES AND THE TYPOLOGY OF CASE

ELENA ANAGNOSTOPOULOU

University of Crete

CHRISTINA SEVDALI

Ulster University

This article presents and discusses evidence that genitive and dative objects regularly become nominative in Ancient Greek passives of monotransitives and ditransitives. This is a typologically and theoretically significant state of affairs for two reasons. (i) As is well known, nonaccusative objects are, in many languages, not allowed to enter into Case alternations, a fact that has been accounted for in the government-binding/principles-and-parameters literature on the basis of the assumption that nonaccusative objects—prototypically datives—bear INHERENT, LEXICAL, or QUIRKY Case. By this reasoning, Ancient Greek genitives and datives must be concluded to have STRUCTURAL Case. (ii) Even in languages where dative-nominative (DAT-NOM) alternations do obtain, they are often limited to ditransitives, a fact that can be taken to suggest that dative qualifies as structural Case only in ditransitives. A language like Ancient Greek, which allows genitive and dative objects to become nominative in all passives (monotransitives and ditransitives), shows that it is, in principle, possible to have a linguistic system where genitive and dative qualify as structural Cases in both monotransitives and ditransitives. Case theories must be designed in such a way as to allow for this option. We argue for an analysis of Case alternations that combines the view that alternating datives and genitives enter the formal operation Agree with a morphological case approach to the distribution of overt case morphology. We furthermore compare Ancient Greek DAT-NOM and genitive-nominative (GEN-NOM) alternations in passives to Icelandic DAT-NOM and GEN-NOM alternations in middles, pointing to a number of interesting differences in the two types of alternations that depend on (i) the types of nonaccusative arguments entering Agree, (ii) the verbal head (Voice or *v*) entering Agree with nonaccusative objects, and (iii) the rules of dependent case assignment in connection to the role of nominative in the two languages.*

Keywords: passivization, structural Case, inherent Case, lexical Case, morphological case, Voice, *v*, Ancient Greek, Icelandic

1. INTRODUCTION: GOALS AND SOME BACKGROUND. This article investigates the nature of dative and genitive Case in Ancient Greek, a language where both Cases alternate with nominative in passives.¹ In the literature, the nature of dative and other nonaccusative objective Cases has been a matter of considerable debate. One can roughly identify three views expressed, in different forms, in GOVERNMENT AND BINDING (GB) and MINIMALIST writings. (i) A standard assumption is that dative is nonstructural Case, usually called ‘inherent’ (Chomsky 1986). Inherent dative, like other inherent Cases, is retained

* We would like to thank Winfried Lechner, Silvia Luraghi, Raffi Folli, Dora Alexopoulou, Dimos Spatharas, Lucia Athanassaki, Theodore Markopoulos, Anna Siewierska, Florian Schäfer, Jim Wood, Roberta D’Alessandro, Sotiris Vrassas, and Artemis Alexiadou for useful discussion of different parts of the article. Thanks also to the audiences of INFL I (Irish Network in Formal Linguistics), ‘Variation and Change in Argument Realization’, Mediterranean Syntax Meeting III, and Leiden University, where versions of this article have been presented. Many thanks to the two anonymous *Language* referees and especially *Language* associate editor Heidi Harley for their useful, generous, and inspiring comments, which helped us clarify our ideas and guarded us from errors. Elena Anagnostopoulou’s research in the final stage of this publication was supported by an Alexander von Humboldt Friedrich Wilhelm Bessel Research award, which is gratefully acknowledged.

¹ Throughout the article, ‘case’ is used for morphological case (i.e. case realization through particular morphemes) and ‘Case’ for abstract Case (in the sense of an abstract feature licensing DPs irrespective of whether it has overt case realization—see Marantz 1991 for a detailed discussion and further references). In places where the term is ambiguously referring to structural Case and morphological case we employ capital ‘Case’, using ‘case’ only when we are specifically referring to the morphological realization of (abstract) Case.

throughout the derivation. Being thematically licensed, it does not alternate with nominative in passives and unaccusatives. A related approach claims that dative is lexical Case, which is idiosyncratically determined by the selecting verb and hence retained throughout the derivation. Woolford (2006) argues that lexical and inherent Case are distinct, lexical Case being idiosyncratically determined and inherent Case thematically licensed. Both are nonstructural, though, and hence do not alternate with nominative. (ii) According to another view, which has been motivated by research on Icelandic (Zaenen et al. 1985 and many others following them), dative is quirky Case; that is, it is idiosyncratically determined by the selecting verb, and, as such, it does not alternate with nominative in NP-movement environments. However, quirky arguments do qualify as subjects in such environments with respect to a number of subjecthood criteria. In the framework of PRINCIPLES AND PARAMETERS (P&P), this has led to proposals dissociating case realization from (extended projection principle (EPP)/Case) LICENSING (as in Marantz 1991, Harley 1995, Schütze 1997, McGinnis 1998, Anagnostopoulou 2003; cf. Yip et al. 1987). (iii) One can also find mixed positions in the literature. Dative is held to be ambiguous, qualifying as structural Case in certain languages and as inherent or lexical or quirky in others. Dative arguments entering into Case alternations have been argued to bear structural Case (see among others Broekhuis & Cornips 1994, Svenonius 2002, 2006; see Alexiadou et al. 2014 for extensive discussion and more references). Dative has been claimed to have a double status even within one and the same language: in certain environments it is structural Case, while it is inherent/lexical in others (see Harley 1995 and Sadakane & Koizumi 1995 for datives in different types of Japanese causatives, and Webelhuth 1995 for datives in German ditransitives).

The three views just outlined reflect the diverse crosslinguistic properties of datives and other nonaccusative objective Cases. At least three types of languages have been identified. (i) The first type is languages like Russian (see Pesetsky & Torrego 2011), where dative and instrumental are idiosyncratically selected by monotransitive verbs (i.e. behaving as lexical Cases), such as ‘help’ and ‘manage’. These Cases never alternate with nominative in passives, and, moreover, arguments bearing dative and instrumental are syntactically inactive and do not participate in passivization.

(ii) Like Russian, Icelandic has idiosyncratic Cases (called *quirky*), for example, the dative and genitive determined by the selecting verbs. These are retained throughout the derivation and do not become nominative in passives. Unlike Russian, though, quirky arguments display subject properties in Icelandic passives (Andrews 1982, Zaenen et al. 1985), a fact that has been interpreted (Marantz (1991) and many following him) as evidence that they are capable of being promoted to subject position, that is, undergoing EPP-driven movement to Spec-TP.

(iii) Finally, there are also contexts where dative arguments enter into Case alternations and thus qualify as bearing structural Case. For example, in German and Dutch, datives surface as nominative in a particular type of passive formed with the auxiliaries *bekommen/krijgen* ‘become’ (Haider 1984, 1985, 2001, Reis 1985, Fanselow 1987, 2000, Everaert 1990, Broekhuis & Cornips 1994, 2010, Webelhuth & Ackerman 1994, Webelhuth 1995, and others). Icelandic direct object datives and genitives become nominative in ‘-st middles’, certain unaccusatives, and stative passives (Sigurðsson 1989, 2009, 2011, Zaenen & Maling 1990, Svenonius 2002, 2006, Thráinsson 2007, among others). In most languages, dative Case alternations do not take place in all environments (see Alexiadou et al. 2014 for a crosslinguistic survey).

In this article, we discuss Ancient Greek, a language that has been reported to show a DAT-NOM and a GEN-NOM alternation, but this has only been noted in passing in pre-

vious formal literature (Adams 1971, Feldman 1978, Larson 1988). Conti (1998), who carefully documents GEN/DAT-NOM in Ancient Greek monotransitives in a descriptive framework, is the only exception to this, and our article is based on Conti's generalizations. We present evidence that both DAT-NOM and GEN-NOM alternations are productively attested in monotransitive and ditransitive passives. Diachronic evidence from the way the phenomenon evolved in Ancient Greek monotransitives suggests that the gradual change in the status of genitives and datives from inherent Cases in the period of Homer to structural Cases in Classical Greek is due to a shift from a stage where they had well-defined semantic functions to a stage where these were obscured or lost.

Following standard practice in the literature, we call benefactives, goals, and sources in ditransitives 'indirect objects' (IOs) and themes 'direct objects' (DOs). Following a long tradition within GB/minimalism, we are employing passivization as a diagnostic tool for analyzing nonaccusative arguments (datives and genitives) as inherent, quirky, or structural Cases. The study of passivization in connection to Case has always sustained a privileged position within recent linguistic theories. As Siewierska (1984) notes, a lot of major linguistic theories have actually evolved out of different approaches to passive constructions. Passivization of dative IOs is generally problematic for many linguistic theories. Before concluding this introductory section we provide a brief and nonexhaustive overview of different frameworks and their stance with respect to the theoretical issue at the heart of this article.

As already outlined, the problem our data pose within GB/minimalism relates to the characterization of dative and genitive case as inherent or structural Case. This is also the case in LEXICAL-FUNCTIONAL GRAMMAR (LFG), to which we return shortly. In other theories, passivization of IOs poses different but related theoretical questions. Adams (1971), focusing on Ancient Greek passives, notes that any transformational-type grammar, Case grammar, or similar approach would have a problem accommodating these data, because in all of these approaches the passive rule must somehow 'make reference to' the theta-role of the IO. Feldman (1978) discusses passivization in Ancient Greek ditransitives in the context of RELATIONAL GRAMMAR (Perlmutter 1983, Perlmutter & Postal 1983, Perlmutter & Rosen 1984, Postal & Joseph 1990), and in particular in connection to the rule of '3-to-1' advancement (see also Shimizu 1975 and Dubinsky 1990 on Japanese).

In the relational framework, passivization of a recipient/goal IO is usually seen as a two-step process: first the IO turns into a DO ('dative shift', i.e. 3-to-2 advancement), and then the DO turns into a subject (2-to-1 advancement). Ancient Greek is viewed as a counterexample to this process, since there is no '3-to-2 advancement/dative shift' strategy turning the IO into a DO. The IO is invariably dative/genitive in most environments in Ancient Greek. Adopting this basic 'advancement' approach in the P&P framework, Larson (1988:365–66) analyzes Ancient Greek as a language that allows direct advancement/promotion of an IO to subject in ditransitives, without the 'intermediate' step of the double object 'John gave Mary a book' construction, with two accusative internal arguments. Larson (1988) views the parametric availability of dative passives in Ancient Greek and Japanese as an argument in favor of his passive analysis of dative shift in terms of inherent Case suppression (see his table 1 on p. 362). He suggests that the locus of parametrization of English-type languages, with 3-to-2 advancement feeding subsequent 2-to-1 advancement, vs. Ancient Greek/Japanese-type languages, with direct 3-to-1 advancement, lies in the locus of absorption of inherent dative Case: whether it is suppressed by dative shift (in English) or passivization (in Ancient Greek and Japanese). Passivization of nonaccusative second arguments of two-place verbs in Ancient Greek

within a functional-grammar framework is further discussed in Mulder 1988. In analyzing the seemingly nonuniform behavior of IOs in Ancient Greek (on the one hand, they become nominative under passivization, but on the other they exhibit other nonargumental behavior, such as nonoccurrence of attraction of the relative pronoun and restrictions on verbal adjective formation), Mulder (1988) argues that their behavior can be attributed to a complex interaction between a SEMANTIC FUNCTION hierarchy and another more syntactic hierarchy, similar to the Moravcsik (1974) hierarchy, where arguments are ranked as $\text{Subj} > \text{DO} > \text{IO}$. According to Mulder, nonaccusative IOs are hybrid elements that in some respects behave like arguments (*vis-à-vis* passivization) but in other respects do not. We are taking a similar position in this article, implemented in terms of the analytic tools available in the P&P framework and the minimalist program.

Butt (2006) provides a comprehensive overview of current theories of Case, focusing on linking theories like LFG and ROLE AND REFERENCE grammar and how they deal with the behavior of quirky datives in passives. More specifically, dative arguments and passivization have been famously discussed within LFG in the work of Zaenen, Maling, and Thráinsson (1985) on Icelandic. The framework assumed in this work is a linking-type model where morphological case is realized as part of a hierarchy (quite similar to Marantz's 1991 approach to m-case realization; cf. Yip et al. 1987).² In this hierarchy, GB/minimalist structural Case is described as default or elsewhere case and is situated fairly low. Quirky Case is viewed as 'irregular' case, and GB/minimalist inherent Case is characterized as semantically predictable case that is subject to syntactic restrictions. In their work, Zaenen, Maling, and Thráinsson (1985) focus on configurations where dative is preserved under passivization: they compare Icelandic to German, and argue that dative is a quirky subject in the former but not in the latter. If they had focused on data where dative alternates with nominative, there would still be a problem of how to best characterize this Case, since this type of dative has an idiosyncratic distribution in actives and yet it alternates in passives.

In this brief overview of the previous non-GB/minimalist literature, we see that there have been some attempts to provide an explanation for DAT-NOM and GEN-NOM alternations, especially in ditransitives, which, however, are rather inconclusive. The present article aims to provide an analysis within a minimalist framework, taking into account the fact that there is no ditransitive-monotransitive asymmetry in Ancient Greek. Our analysis builds on a number of recent approaches to dative and genitive Case that dissociate the passivizability of IO arguments from the existence of dative shift and recognize that any argument is, in principle, allowed to enter the formal operation Agree, the structural licensing condition underlying Case alternations. We hope that our investigation will contribute to the discussion of DAT-NOM alternations in other frameworks as well.

The article is organized as follows. We first summarize some relevant properties of Ancient Greek morphosyntax (§2), and then present the basic facts of Case alternations in Ancient Greek passives of monotransitives and ditransitives (§3). We explore how Ancient Greek alternations can be accommodated in terms of existing theories of Case in §4, and conclude that the Ancient Greek data support modular theories that treat Case alternations as the result of structural licensing relations combined with morphological case spelling out these relations at phonetic form (PF). Finally, we compare Ancient Greek to Icelandic (§5), pointing to and accounting for a number of interesting differences in the distribution of DAT-NOM and GEN-NOM alternations attested in the two languages, and then summarize (§6).

² We come back to the role of hierarchies in our discussion of m-case approaches to case in §4.

2. SOME RELEVANT PROPERTIES OF ANCIENT GREEK MORPHOSYNTAX. The term ‘Ancient Greek’ is equivalent to ‘Classical Greek’ and refers to the dialect of Greek spoken in Athens in the fifth and the fourth centuries BC. Our collection of data relies on Ancient Greek grammars and the use of corpora (such as Perseus Digital Library and Thesaurus Linguae Graecae),³ as well as the data and generalizations collected and discussed in Conti 1998 concerning specifically Case alternations in monotransitives. We make two preliminary notes on the data. First, the construction we are looking at, the passive, is rare and as such the data are quite limited. In the active-passive alternations presented below, the passive examples are original and the active ones reconstructions.⁴ Second, the lack of native speakers renders it difficult to label some constructions as ungrammatical. For some structures, grammarians are fairly confident in claiming that they are unattested and they implicitly take them to be ungrammatical, but it is nonetheless possible that, even if a construction is not instantiated in the corpus, it could be grammatical. We point to two such cases in §3, where we discuss Case alternations in monotransitives and ditransitives.⁵

Before turning to the specific issue of passivization of objects in Ancient Greek, we summarize some relevant facts of Ancient Greek morphosyntax: the passive/middle distinction, word order, agreement, and morphological case.

2.1. MIDDLES AND PASSIVES IN ANCIENT GREEK. Ancient Greek has three morphological voices: active, passive, and middle. Passives and middles are identical in form in all tenses apart from future and aorist (both of which are perfective). Table 1 illustrates the basic morphological paradigm of the verb *luo*: ‘loosen’ in the first-person singular.

As discussed in Lightfoot 1979, Rijksbaron 2002, George 2005, and all major Ancient Greek grammars including Schwyzer 2002 [1953], the Ancient Greek passive is historically derived from the middle. Proto-Indo-European (PIE; as posited on the basis of pre-Homeric Greek and Sanskrit) had a morphological distinction only between ac-

³ Due to the rarity of passives, and in particular passives of verbs selecting for datives or genitives and passives of ditransitives, most of our examples are from the following Ancient Greek grammars: Goodwin 1894, Jannaris 1897, Smyth 1920, and Schwyzer 2002 [1953]. When an example is from a corpus we state this explicitly. Again due to the rarity of the construction, we do not limit ourselves to a subpart of the Ancient Greek texts, as one would normally do in order to exclude texts of an extreme literary style.

⁴ Regarding the use of reconstructed examples for the active, the standard practice in the relevant literature is either to ENTIRELY OMIT the active examples (exactly because they are frequent, easy to find, and available to every grammar or dictionary of Ancient Greek—this is the practice employed by Luraghi (2003, 2004, 2010) and George (2005), among others), or to USE RECONSTRUCTED EXAMPLES for the active (Feldman 1978:500 (exx. 4a,b, 5a, 6a, and even the ungrammatical reconstructed 7), Adams 1971 (exx. 4–6, 18–20, 23–25), Larson 1988:366 (ex. 46 from Feldman 1978), Mulder 1988:223 (exx. 8, 23, 24), Rijksbaron 2002:138 (exx. 404–5 among others)). Our practice in this article is that when something is uncontroversial, frequent, and cited in many sources, we do not provide an original example but a reconstructed one. When something is controversial and infrequent (such as all of the passive examples), then we provide the original example.

⁵ A referee points out that it would be helpful to discuss the basis on which we have decided in particular cases whether we take unattested to mean ungrammatical. In the present article, there are two relevant cases to consider. First, according to Conti (1998), there are some genitive and dative objects of monotransitive verbs that are nonalternating throughout the history of Greek (see §3.2 for discussion). In this case, we take ‘unattested’ to mean ungrammatical because we think that the unavailability of the passives of these verbs is due to a larger pattern of thematic/semantic restrictions on passivization of verb classes that lies beyond the scope of this article (cf. the discussion on Conti 1998 in §3.2). Second, it is not clear from the data available to us how dative and genitive objects behave under passivization with verbs selecting for a dative IO and a genitive DO (see §3.4 below for discussion). In this case, we just remain agnostic about this construction; that is, we do not take ‘unattested’ to mean ‘ungrammatical’. In principle, we expect both the dative IO and the genitive DO to be able to alternate in passives based on these verbs. We do not use reconstructed ‘ungrammatical’ sentences at all in this article.

	ACTIVE	MIDDLE	PASSIVE
PRESENT	lu-o:	lu-omai	lu-omai
IMPERFECTIVE PAST	elu-on	elu-ome:n	elu-ome:n
AORIST	elu-sa	elus-ame:n	eluth-e:n
FUTURE	lu-so:	lus-omai	luthe:s-omai
PERFECT	leluk-a	lelu-mai	lelu-mai
PLUPERFECT	eleluk-e:n	elelu-me:n	elelu-me:n

TABLE 1. Morphological paradigm of the three voices in Ancient Greek.

tive and middle, and the passive emerged as an extension of the use of the middle (Clackson 2007).

According to the traditional definition (see George 2005:2, 5, n. 9, and Ch. 1 more generally), the general function of the Ancient Greek middle is to ‘indicate that the effects of the action described by the verb in some way affect the subject of the verb’. This vague description seeks to unify a number of functions that seem to resist a uniform characterization.⁶ The most common uses of the Ancient Greek middle involve reflexivity. The use of the middle form to express DIRECT REFLEXIVITY is confined to particular verb classes, like verbs of ‘natural habitual action’ (Gildersleeve 1900) or verbs expressing ‘external and natural acts’ (Smyth 1920). Examples of the middle expressing direct reflexivity are *louomai* ‘wash oneself’, *trepomai* ‘turn oneself’, and *gumnazomai* ‘exercise oneself’, but also *apagchomai* ‘hang oneself’. Another use of the middle is the one described as INDIRECT REFLEXIVITY, whereby the middle form indicates that the subject has a ‘special interest’ in the state of affairs in which s/he is involved. This is the most frequent use of the middle, according to Smyth (1920), and is exemplified in 1 with an example taken from Lightfoot 1979.⁷

- (1) Ho stratio:te:-s lou-etai ton hippo-n.
 the soldier-NOM wash-3SG.PRS.MID the horse-ACC
 ‘The soldier washes the horse (for his own interest).’

A way to view these middles is to say that they contain an implicit benefactive argument, one that is ‘absorbed’ by the middle morphology (Lightfoot 1979). According to this analysis, indirect middles are hidden ditransitives/applicatives with an overt accusative theme and an absorbed dative benefactive argument, as schematized in 2.

- (2) $[V_{\text{mid}} + \text{DP}_{\text{ACC}}] = [V + \text{DP}_{\text{DAT}} + \text{DP}_{\text{ACC}}]$

As the following examples from Rijksbaron (2002:148, exx. 429, 430) show, benefactive arguments are indeed morphologically dative in Ancient Greek.

⁶ Cf. the main functions of the IE middle described by Wackernagel (1950:124–29), namely direct and indirect reflexives, reciprocals, and verbs of taking (George 2005:5). See the discussion of many languages showing a fundamental active/middle opposition (Klaiman 1991, Palmer 1994). Modern Greek has the same type of opposition (see Alexiadou & Anagnostopoulou 2004, Alexiadou et al. 2015 for discussion and references).

⁷ The Ancient Greek examples are transcribed according to the conventions used in the Perseus Digital Library. In the original examples we separate the stem from the endings with hyphens, and in the glosses, we include all of the information that is conveyed in the word in question separated by hyphens or periods. However, we should note a complication of this system: it is often the case that when the tense or the voice or the aspect of a verbal form changes, the stem changes as well as the ending. To take a random example, the active present of ‘see’ in Ancient Greek is *hore-o:* while the passive aorist is *ho:phth-e:n*. The hyphen convention is therefore used only to separate the stem from the ending; it does not necessarily indicate that the ending alone is used to convey the morphological information that exists in the glosses. Abbreviations used in the glosses are as follows: ACC: accusative, ACT: active, AOR: aorist, DAT: dative, GEN: genitive, INF: infinitive, INST: instrumental, MID: middle, NOM: nominative, PASS: passive, PL: plural, PRS: present, PST: past, PTPC: participle, SG: singular.

- (3) ... deipn-a basil-ei paraskueaz-ein
 meals-ACC king-DAT prepare-INF.ACT
 ‘(to command) the preparation of meals for the king’

(Herodotus, *Historia* 7: 32)

In RECIPROCAL MIDDLES, the morphology indicates reciprocal rather than reflexive reduction, for example, *machomai* ‘fight one another’, *dialegomai* ‘talk to one another’, and so forth.⁸

The uses of the middle described so far express different forms of theta-role reduction and could, in principle, be subsumed under a uniform definition according to which middle morphology marks any of several valency reduction operations (or ‘absorbs’ several theta-roles). This is not always the case, however, as in the examples in 4 cited by George (2005:5) as providing straightforward evidence that the middle morphology does not always mark theta-role reduction.

- (4) a. Ho Achilleu-s pher-ei to depas.
 the Achilles-NOM carry-3SG.PRS.ACT the goblet.ACC
 ‘Achilles is carrying the goblet.’
 b. Ho Achilleu-s pher-etai to depas.
 the Achilles-NOM carry-3SG.PRS.MID the goblet.ACC
 ‘Achilles is carrying the goblet (as a winner)/Achilles wins the goblet.’

Both 4a and 4b involve just two theta-roles, an agent-subject and a theme-object. The presence of middle morphology in 4b does not signify a change in the argument structure of the verb, but rather the fact that the subject is affected to a greater extent by the action denoted by the predicate. In 4b *Achilles* does not simply carry the goblet but rather he wins it.⁹

In addition to the above-mentioned uses, the middle is also employed in ANTI-CAUSATIVES and PASSIVES (see extensive discussion and examples in Lavidas 2007, 2010). Following standard literature (Manzini 1983, Jaeggli 1986, Roeper 1987, Baker et al. 1989, Klaiman 1991, Levin & Rappaport Hovav 1995, Reinhart 2000, Chierchia 2004, and many others), we assume that the object is promoted to subject in both passives and anticausatives, but passives contain an implicit external argument, as can be detected by the availability of optional oblique phrases (‘by’-phrases, etc.), while anticausatives lack it.¹⁰ The two can be easily kept apart in languages like English that distinguish them morphologically (e.g. *the boat sank* vs. *the boat was sunk*), but this is not so easy in languages where one and the same (nonactive, middle, reflexive) morphology marks them both, in opposition to the active (see Alexiadou & Anagnostopoulou

⁸ There is also a function that is not common and has entirely disappeared from Greek in later times. It can be called the ‘causal middle’: middle morphology is employed in a construction that can be translated as ‘have someone do something’ or ‘have something be done to someone’.

(i) Themistokle:-s Kleophanto-n ton huio-n hippe-a men edidax-eto
 Themistocles-NOM Cleophantus-ACC the son-ACC horseman-ACC then teach-3SG.AOR.MID
 agatho-n
 good-ACC
 ‘Themistocles had his son Cleophantus taught to be a good horseman’

(Plato, *Menexenus*: 93 d)

⁹ Examples like this seem to instantiate what has been characterized as cases where ‘the [subject] stood in an *experiential* disposition to the predication’ (see George 2005, n. 8).

¹⁰ As argued for in Alexiadou et al. 2006, 2015, this description of the passive vs. anticausative distinction in English, Modern Greek, German, and Hebrew is an oversimplification. It is sufficient, however, for the purposes of the present discussion.

2004 and references cited therein for discussion of the difficulties one is confronted with in the case of Modern Greek). Ancient Greek also seems to be a language in which the passive-anticausative syntactic distinction is obscured by morphological syncretism. Even though it underwent a transition from a two-voice system (active-middle; PIE, pre-Homeric Greek) to a three-voice system (active-middle-passive; Homer, Classical Attic),¹¹ there is no one-to-one correspondence between morphological middles and anticausatives, on the one hand, and morphological passives and syntactic passives, on the other. First, only the (perfective) future and aorist (past) have a middle-passive opposition; in all other tenses/aspects one and the same morphology ('middle', i.e. non-active) is employed for both anticausatives and passives. Moreover, according to the literature (see e.g. George 2005:Ch. 1, Lavidas 2007, 2010 for discussion and references), unambiguous syntactic passives showing detransitivization, object-to-subject promotion, and the presence of an oblique external argument can surface with middle morphology in Ancient Greek, even in the future and aorist where passive morphology is available.¹²

For the purposes of the present discussion, it is not important to investigate the extent to which anticausative vs. passive syntax is aligned with the morphological distinction between a middle and a passive morphology.¹³ We assume that a defining property of the syntactic passive is that an oblique external argument, prototypically an agent, can be included. The external argument in Ancient Greek passives can be included as a PP (most frequently *hupo* 'by' + genitive) or as a bare dative (the latter mainly in the perfect and constructions related to it; see George 2005 for extensive discussion of these and other forms in which external arguments are realized). We thus treat all constructions showing the three crucial characteristics of passivization, namely, (i) detransitivization, (ii) 'promotion' of object to subject (i.e. the 'logical object' surfaces with

¹¹ The beginnings of a morphological passive are found in Homer and the transition was completed by the time of Classical Attic, according to Schwyzler 2002 [1953] and Klaiman 1991 (among others).

¹² For example, George (2005:16) states:

As I am using the term passive in a functional rather than formal sense, it is generally immaterial whether the verb in question has a peculiar passive form or one that can also be middle. When, as occasionally will be the case, the syncretism of middle and passive does seem to have affected agent construction (as with *o:phelo*: 'help, support'), special mention will be made of the fact. For the most part, however, both morphologically distinct passives and those that share their morphology with middle verbs behave similarly as far as agent marking is concerned.

Lavidas (2010:79) writes:

The middle type is not identified with specific structures (reflexive or anticausative), nor is the passive type identified with the passive structure in Classical Greek. I suppose, therefore, that it is concerned with, at least from the Classical era onwards, two different morphological types of the same non-active category, which are used alternately. For this reason, I prefer and propose the terms *non active form I* and *non active form II*, and I do not use the traditional terms middle and passive form.

Lavidas (2010:79, n. 18) refers to Haacke (1852), Kowaleck (1887), Wistrand (1941), Zsilka (1966), and others as providing evidence for this.

¹³ We note, though, that this question cannot be answered by simply listing counterexamples to the equation 'passive morphology = passive syntax and middle morphology = anticausative syntax'. One would have to look at how systematic these counterexamples are, what kind of external argument theta-roles are expressed by the oblique PPs present in apparent future and aorist passives showing middle morphology, and whether there is a possible explanation for cases of apparent optionality in the distribution of middle and passive morphology in anticausatives and passives. We leave these questions for future research.

nominative Case), and (iii) an oblique external argument as syntactic passives, regardless of their morphology.¹⁴

A final note concerning ‘by’-phrases. In the literature it has been questioned whether the presence of a ‘by’-phrase unambiguously identifies the passive in Ancient Greek because, as frequently stated, ‘by’-phrases can also accompany morphologically active verbs with a ‘passive meaning’ (Schwyzer 2002 [1953]:284, 298).¹⁵

- (5) Poll-oi huph’ Hektor-os androphon-oio thne:sk-ontes
 many-NOM by Hector-GEN man-slaying-GEN die-PTCP.AOR.ACT
 pipt-o:sin.
 fall-3PL.PRS.ACT

‘Many shall fall dying by man-slaying Hector.’ (Homer, *Iliad*: a 242)

In 5, a prototypical ‘by’-phrase *huph’ Hektoros* ‘by Hector’ is accompanying the morphologically active participle *thne:skontes* ‘dying’. Under the assumption that the passive must necessarily be marked by nonactive morphology, examples like 5 provide evidence that ‘by’-phrases do not always signify the passive in Ancient Greek, unlike English. Following George (2005:7, n. 16, and p. 17), we generally disregard constructions like 5, which are limited to very few verbs. George proposes that such instances are lexical suppletive passives to transitive verbs of a different lexical root, for example, *apokteino*: ‘kill’ – *apothne:sko*: ‘die’, *poieo*: ‘do/act’ – *pascho*: ‘suffer’ (see also Gildersleeve 1900 and Rijksbaron 2002). Being very limited, such cases do not seriously undermine the generalizations that in Ancient Greek (i) the passive bears nonactive (middle or passive) morphology, and (ii) the passive contains an implicit external argument that can be modified by PPs.

2.2. WORD ORDER. For languages like English, French, and Icelandic, word order is a reliable diagnostic for the status of elements in a clause. Word order has been used as a diagnostic for subjecthood, as well as in relation to the DAT-NOM alternation, where double object/applicative constructions obligatorily show the Goal > Theme order and prepositional ditransitives the reverse Theme > Goal order.¹⁶ It is therefore important to point out that Ancient Greek word order is extremely free, exhibiting extensive scrambling as well as discontinuity in the clausal domain and inside phrases (Devine & Stephens 2000, Mathieu & Sitaridou 2005). In view of this, word order cannot serve as a reliable diagnostic for the position of DPs in Ancient Greek clauses (e.g. A vs. A’, subject vs. object in NP-movement constructions, etc.).

2.3. AGREEMENT AND DISTRIBUTION OF MORPHOLOGICAL CASES. Passive in Ancient Greek follows the standard subject/nominative-verb agreement pattern that the language in general does. The verb obligatorily agrees with the nominative subject in the passive as well as in the active. Ancient Greek has robust subject/nominative-verb agreement and subject/nominative pro-drop,¹⁷ a few cases of default agreement (with

¹⁴ Most of our examples have an external argument PP or dative in order to make sure that they are true passives. Note that some of our examples also contain perfect passive participles modified by oblique agents (usually datives).

¹⁵ For example, Lavidas (2007, 2010), based on examples like 5, claims that Ancient Greek passives lack a passive Voice of the type argued for in Kratzer 1996. We come back to this in n. 45.

¹⁶ Particularly interesting, in this respect, is the discussion of DAT > ACC vs. ACC > DAT (‘inversion’) orders in Icelandic (Holmberg & Platzack 1995, Collins & Thráinsson 1996, and others).

¹⁷ As pointed out by a referee, given the freedom of word order, we cannot be a priori sure that the right description for Ancient Greek is that it displays subject agreement and subject pro-drop rather than nominative agreement and nominative pro-drop. For this reason, we remain neutral with respect to the two options. The

raising predicates like *dokei* ‘it seems’ and true impersonals like *dei/chre:* ‘must’, for example), and no object agreement. Nouns inflect in five morphological cases: nominative, genitive, dative, accusative, and vocative. Table 2 illustrates this with the masculine noun *logos* ‘reason’ of the second declension.

	SINGULAR	PLURAL
NOMINATIVE	log-os	log-oi
VOCATIVE	log-e	log-oi
ACCUSATIVE	log-on	log-ous
GENITIVE	log-ou	log-o:n
DATIVE	log-o:i	log-ois

TABLE 2. Morphological paradigm of a masculine noun of the second declension.

Nominative is reserved for subjects of finite clauses, while objects of verbs can appear in all three objective cases, namely genitive, dative, and accusative. All major grammars of Ancient Greek (Goodwin 1894, Jannaris 1897, Smyth 1920, Schwyzer 2002 [1953]) state that verbs take as their objects either DPs or infinitival and finite clauses, but not PPs. The same holds for ditransitives: they generally subcategorize only for two morphologically case-marked object DPs, not a noun and a PP.¹⁸ The morphological case of the object depends on the selecting predicate: verbs of particular verb classes take objects in particular cases. Prepositions also assign different cases to their DP complements: some prepositions assign accusative, others dative, and others genitive.

It is sometimes the case that verbs and prepositions may assign more than one case with a concomitant change in the meaning of the verb. For example, the verb *lumaino-mai* means ‘destroy’ when the (inanimate or animate) object is accusative, while it means ‘offend’ with a dative animate object. Complex verbs formed by a prefixal/incorporating preposition and a verbal root assign to their object DPs the morphological case determined by the preposition. For example, verbs formed with the preposition *en* ‘in’ take objects carrying dative case, just like DP complements of the P head *en* (see 12 below for examples of such verbs). This is an important fact, as is discussed in §4.

3. CASE ALTERNATIONS IN ANCIENT GREEK PASSIVES: MONOTRANSITIVES AND DITRANSITIVES.

3.1. DISTRIBUTION OF CASES WITH MONOTRANSITIVE VERBS. Ancient Greek monotransitive verbs take objects in all three objective cases. Accusative is by far the most common case for objects. For this reason, traditional grammars do not list the verb classes that take accusative objects, the way they do with verbs taking objects in other cases. As summarized by Luraghi (2010:64–65), accusative is the case that surfaces on totally affected themes undergoing a change of state and on themes undergoing a change of location. It occurs with (highly transitive) verbs of creation and destruction and verbs of killing, but it may also surface on nonaffected themes (e.g. on objects of subject experiencer verbs such as ‘fear’).

main point of the article is not affected, as long as nominative case, nominative agreement, and pro-drop reflect an Agree relationship between the nominative DP and T.

¹⁸ Ancient Greek verbs may, in fact, take prepositional complements, but such cases are considered exceptional. One and the same verb may take a DP object in more than one case or a PP complement, with a change in meaning (see also the discussion in the main text). Consider, for example, the verb *lego:* ‘to speak’, which has the following possibilities: *lego: ti* (ACC) ‘say something’, *lego: tini* (DAT) *ti* (ACC) ‘say something to someone’, *lego: kata tinos* (P + GEN) ‘speak against someone’, *lego: huper tinos* (P + GEN) ‘speak in someone’s defense’, *lego: pros ti* (P + ACC) ‘speak in reference to something’, and so forth. Later, however, PPs spread in the diachrony of Greek, replacing datives and to a certain extent genitives (see Luraghi 2003, Bortone 2010 for discussion and references).

According to traditional grammars, the following verb classes take objects surfacing with dative case.

- (6) Verb classes selecting for dative DP objects
- a. Verbs denoting appropriateness (*armozo*: ‘is appropriate’, etc.)
 - b. Equality/agreement (*omoiazo*: ‘resemble’, *isoumai* ‘be equal to’, etc.)
 - c. Friendly or adversarial feeling or action¹⁹ (*epikouro*: ‘assist’, *timo:ro*: ‘punish’, *phthono*: ‘be jealous of’, etc.)
 - d. Persuasion, submission, meeting (*peithomai* ‘trust, obey’, *epomai* ‘follow’, *meignumai* ‘join’, etc.)
 - e. Complex verbs with the prepositions *en-* ‘in’, *sun-* ‘with’, *epi-* ‘on’, *para-* ‘next to’, *hupo-* ‘under’, and the adverb *omou* ‘similarly’ (*omo-noo*: ‘agree’, *sun-eimi* ‘coexist’, *sun-oiko*: ‘cohabit’, *sum-pratto*: ‘assist’, *em-meno*: ‘inhabit’, *em-pipto*: ‘attack’, *epi-cheiro*: ‘attempt’, *par-istamai* ‘present’, *hupo-keimai* ‘be placed below’, etc.)

Complementing the traditional generalizations above, Luraghi (2010:66–67) summarizes the main uses of dative objects as follows: the dative occurs (i) with verbs selecting for animate objects not undergoing a change of state such as ‘help’ (p. 66, ex. 12); (ii) on objects of experiencer verbs like ‘hate’ and ‘rejoice, like’ (she calls them ‘stimuli’; p. 66, ex. 14); (iii) on objects of verbs like ‘use’, in which case they are inanimates and semantically close to the instrumental (modifier) function of the Ancient Greek dative (p. 66, ex. 13); and (iv) with verbs requiring a comitative interpretation of their objects, such as ‘follow’, in which case they alternate with PPs introduced by comitative prepositions (p. 67, exx. 17, 18).

The verb classes in 7 take objects in the genitive case.

- (7) Verb classes selecting for genitive DP objects
- a. Memory (*mimne:iskomai* ‘remember’, *epilanthanomai* ‘forget’, etc.)
 - b. Beginning/ending (*archo*: with the meaning ‘begin’, *pauomai* ‘finish’, etc.)
 - c. Taking care of (*epimelomai* ‘take care of’, *amelo*: ‘neglect’, *kataphrono*: ‘look down upon’, etc.)
 - d. Wanting, enjoyment, being part of (*epithumo*: ‘want, desire’, *ero*: ‘love’, *koino:no*: ‘have a share of, take part in’, etc.)
 - e. Losing, needing (*steromai* ‘lose’, *aporo*: ‘wonder’, *deo:/deomai* ‘need’, etc.)
 - f. Feeling/perception (*aptomai* ‘touch’, *akouo*: ‘listen’, etc.)
 - g. Attempt, success/failure (*peiro:/peiromai* ‘try’, *apotugchano*: ‘fail’, etc.)
 - h. Ruling (*archo*: with the meaning ‘rule, govern’, *turanno*: ‘be a monarch’, etc.)
 - i. Comparison (*pleonekto*: ‘exceed’, *pro:teuo*: ‘come first’, *meionekto*: ‘be worse than’, etc.)

Luraghi (2010:65–66) discusses the distribution of the genitive focusing specifically on the conditions under which it alternates with the accusative. (i) Highly transitive verbs

¹⁹ Other verbs of beneficence and maleficence—such as *o:phelo*: ‘help, support’, *blapto*: ‘hinder, damage’—take accusative objects; that is, this verb class, like many verb classes, is not homogeneous with respect to the Case the verbs in it assign. In this sense, the distribution of different Cases is idiosyncratic in Ancient Greek, similarly to Russian and Icelandic mentioned in §1. And yet, such idiosyncratic Cases alternate in Ancient Greek. See §4 for theoretical discussion of this issue.

with affected objects undergoing a change of state may take accusative or genitive complements. In this case, the genitive signifies a partitive meaning: that is, the action expressed by the verb affects only a part of the genitive object (as opposed to the accusative, which signifies total affectedness). According to Luraghi, this genitive typically occurs with indefinite NPs, a phenomenon reminiscent of partitive case in, for example, Finnish (Kiparsky 2005, among many others). (ii) Like the dative, the genitive frequently surfaces on ‘stimuli’ objects of experiencer verbs. In some cases, the genitive alternates with the accusative with no obvious difference in meaning. However, there are also verbs that take accusative objects when the experiencer subject has agent-like properties and genitive objects when the experiencer subject lacks them. A verb behaving this way is *orégein* ‘reach (out)’. (iii) Some semantically related verbs, such as verbs of ruling (e.g. *árchein* ‘govern’; p. 6, ex. 10), exclusively or almost exclusively take the genitive (they may take the dative, to a limited extent, but never the accusative). (iv) Finally, with a spatial meaning, the genitive has a use reminiscent of the ablative expressing distance/separation (p. 7, ex. 11). In this case, it does not alternate with the accusative.

3.2. CASE ALTERNATIONS IN MONOTRANSITIVES. Example 8 instantiates the ACC-NOM alternation familiar from all nominative-accusative languages with a passive and overt case morphology.²⁰

(8) ACC-NOM

a. Ho didaskal-os graph-ei **te:n epistole:-n.**
 the teacher-NOM write-3SG.PRS.ACT the letter-ACC
 ‘The teacher is writing the letter.’

b. **He: epistole:** hupo tou didaskal-ou graph-etai.
 the letter.NOM by the teacher-GEN write-3SG.PRS.PASS
 ‘The letter is written by the teacher.’

Examples 9 and 10 are instances of the DAT-NOM alternation.

(9) DAT-NOM

a. Athe:nai-oi epibouleu-ousin **he:m-in.**
 Athenians-NOM betray-3SG.PRS.ACT us-DAT
 ‘The Athenians are betraying us.’

b. **He:m-eis** hup’ Athe:nai-o:n epibouleu-ometha.
 we-NOM by Athenians-GEN betray-1PL.PRS.PASS
 ‘We are betrayed by the Athenians.’ (Thucydides, *Historia* I: 82. 1)

(10) a. Ho Odusse-us ephthon-e:se **Palame:d-ei** dia sophia-n.
 the Ulysses-NOM envy-3SG.AOR.ACT Palamedes-DAT because wisdom-ACC
 ‘Ulysses was jealous of Palamedes because of his wisdom.’

b. **Palame:de:-s** dia sophia-n ephthone:th-e: hupo tou
 Palamedes-NOM because wisdom-ACC envy-3SG.AOR.PASS by the
 Odusse-o:s.
 Ulysses-GEN
 ‘Palamedes was envied by Ulysses because of his wisdom.’

(Xenophon, *Memorabilia* IV: 2. 33)

Finally, examples 11 and 12 illustrate the GEN-NOM alternation.

²⁰ Examples 8–12 are taken from Ancient Greek grammars: Goodwin 1894, Jannaris 1897, Smyth 1920, and Schwyzler 2002 [1953].

(11) GEN-NOM

- a. Hout-oi arch-ousi [ho:n eks' aste-os
they-NOM oppress-3PL.PRS.ACT whoever.GEN from city-GEN
est-e].
be-2PL.PRS.ACT

'They oppress whoever is from the city.'

- b. [Hos-oi eks' aste-os est-e] skeps-asthe oti
whoever-NOM from city-GEN be-2PL.PRS.ACT think-2PL.PRS.ACT that
hupo tout-o:n houto: sphodra e:rch-esthe.
by them-GEN so much oppress-2PL.AOR.PASS
'And whoever (of you) are from the city, think how much oppressed
you are by them.'²¹ (Lysias, *Against Eratosthenes*: 92)

(12) a. Katapse:phe:z-o: tin-os.

condemn-1SG.PRS.ACT someone-GEN

'I condemn someone.'

- b. Ekeino-s katapse:phis-the:.

he-NOM condemn-3SG.AOR.PASS

'He was condemned.'

(Xenophon, *Historia* V: 2. 36)

Conti (1998:16–19) argues conclusively that the availability of DAT-NOM and GEN-NOM alternations is a productive feature of Ancient Greek syntax by examining the active-passive alternation in the texts of several authors (drawn from the *Thesaurus Linguae Graecae* corpus) covering different periods of Ancient Greek: Homer, Herodotus, Lysias, Thucydides, Plato, Xenophon, Demosthenes, Plutarch, and Lukian. In the works of each of these authors, passivization of 119 verbs selecting for genitive or dative objects is investigated. Conti takes into account the fact that dative and genitive objects of transitive verbs may alternate with accusatives under the following conditions (1998:19–20).

- With verbs like *epicheiréo:*, accusative surfaces on inanimate objects (and the verb means 'try/begin') and dative on animate/human objects (and the verb means 'attack').
- With verbs like *akroáomai* 'listen to', the genitive occurs on animate objects (immediate perception), and the accusative occurs on the communicated message (indirect perception).
- With verbs like *pleonektéo:*, choice of case signifies a difference in meaning; the verb means 'cheat' when the animate object bears accusative and 'exceed' when it has genitive.
- Verbs like *memphomai* 'scold' select either for a dative or for an accusative object, with no obvious difference in meaning.
- Finally, in some instances, case correlates with animacy/gender distinctions (a phenomenon reminiscent of differential object marking).²² When the object is masculine or feminine (animate), it bears dative or genitive case; when it is neuter

²¹ This is an example that features the phenomenon of Case attraction in headless relative clauses. The pronoun that introduces the relative clause in 11a, *ho:n*, appears in the genitive, because the headless relative serves as the object of *archousi*, which assigns genitive. In the passive example 11b, the pronoun *hosoi* appears in the nominative, because the whole (headless) relative clause is the subject of the passivized verb.

²² According to Lucia Athanassaki (p.c.), this is not a productive feature of Ancient Greek syntax, unlike, for example, Spanish *a*-marking.

(inanimate), it bears accusative (according to Conti, a verb displaying this alternation is *chairo*: (*chairomai*) ‘be joyful/be happy about/with’).

Conti (1998:21–22) disregards passives based on verbs that allow their objects to surface as accusative, such as *akouo*: ‘listen to’ or *enochleo*: ‘disturb’, as well as passive constructions with a neuter subject that could be accusative in the active, and only considers passives that could not possibly have a transitive source with an accusative object. The examination of such clear-cut instances of passivization leads to the following picture of DAT-NOM and GEN-NOM alternations in Ancient Greek (see Conti 1998:§3).

(i) Even though passivization was not a productive process in the period of Homer, which means that there are not many attested passive examples available, there are enough examples to show that GEN-NOM alternations began to exist in passives, especially with so-called partitive genitive objects (complements of verbs like *eldomai* ‘try to achieve something’ and *anasso*: ‘govern’). It is unclear whether DAT-NOM alternations also occurred in that period, since examples of this alternation at that time were limited to locative objects of the verb *naío*: ‘live’, which also took accusative objects. Herodotus had productive GEN-NOM alternations and presented some uncontroversial instances of DAT-NOM alternations. Both alternation types became widespread in later texts, being more common in some authors (Thucydides, Plato, Demosthenes, Plutarch) than in others (Lysias, Xenophon, Lukian). They took place in passives based on verbs from various semantic classes (see Conti 1998:31 for a list of verbs productively showing the two alternations).

(ii) Not all Ancient Greek verbs selecting for genitive and dative objects form passives showing DAT-NOM and GEN-NOM alternations. There are aspectual and thematic restrictions. (a) Stative and experiencer-subject verbs generally disallow the passive;²³ but, even in the few cases when the medio-passive form has a passive meaning, the nominative subject does not have the same interpretation as the genitive or dative object of the corresponding active verb (an example discussed by Conti is the passive of the verb *cholóomai* ‘be angry’; see her examples on p. 35). (b) Verbs selecting for ablative genitive objects and comitative or locative dative objects (e.g. *eiko*: ‘distance oneself, avoid’, *dialegomai* ‘discuss’) do not form passives. The few verbs that do (e.g. *naío* ‘live’ and *pleonektéo*: ‘exceed/cheat’) also select for accusatives in the active, and the corresponding passives could be analyzed as featuring ACC-NOM alternations.

(iii) Passives showing the DAT-NOM and the GEN-NOM alternation are productively formed with verbs showing agentive involvement and object-affectedness (of (a part of) the inanimate or animate object toward which the action is directed) or object involvement in the event expressed by the verb (as a person participating in the event, an object employed as the instrument, etc.). Such verbs are, for example, *agnoéo*: ‘ignore’, *adikéo*: ‘do an injustice to’, *airéo*: ‘take, grab’, *airo*: ‘lift, praise’, *blápto*: ‘harm’, *miséo*: ‘hate’, *nikéo*: ‘win’, *o:pheléo*: ‘help’, *ple:sso* ‘hit’, *phéugo*: ‘avoid’, *chráomai* ‘use’, among others (see Conti 1998:41–42 for an extensive list of verbs).

3.3. DISTRIBUTION OF CASES WITH DITRANSITIVE VERBS. Recall from §1 that we call benefactives, goals, and sources in ditransitives ‘indirect objects’ (IOs) and themes ‘di-

²³ Conti (1998:33) characterizes such verbs as stative and process-denoting (‘Verben, die einen Zustand bzw. einen Prozess zu beschreiben scheinen’), but from the list of verbs provided, that is, *metecho*: ‘take part’, *brimóomai* ‘get angry’, *éoika* ‘be similar’, *thymóomai* ‘be angry’, *prépo* ‘be appropriate’, *e:domai* ‘be happy’, it can be concluded that they are stative and psych-verbs.

rect objects' (DOs). Recall furthermore from §2.3 that Ancient Greek does not have an alternation between a DP-PP frame and a double object construction of the type found in English ('dative shift'; see Oehrle 1976, Perlmutter & Rosen 1984, Larson 1988, among many others).²⁴ Ancient Greek ditransitives show the case patterns in 13.

(13) Case arrays in Ancient Greek ditransitives²⁵

- (i) Accusative IO – Accusative DO
- (ii) Dative IO – Accusative DO
- (iii) Genitive IO – Accusative DO
- (iv) Dative IO – Genitive DO

Let us briefly go through the verb classes instantiating the four different case patterns in 13. The verb classes in 14 take two accusative objects.

(14) Accusative IO – Accusative DO

(for example, *ero:to: tina ti* 'ask someone (ACC) about something (ACC)')

- a. Asking, demanding, deprivation, dressing/undressing (*ero:to:* 'ask', *apaiteo:* 'order', *enduo:* 'dress', *ekduo:* 'undress', etc.)
- b. Teaching, reminding (*didasko:* 'teach', *hupomimne:isko:* 'remind', etc.)
- c. Action, reporting, benefit (*o:phelo:* 'benefit', *lego:* 'say', etc.)

The verb classes in 15 take a dative and an accusative object.

(15) Dative IO – Accusative DO

(for example *lego: tini ti* 'say to someone (DAT) something (ACC)')

- a. Saying, ordering, showing, giving (*lego:* 'say', *de:lo:* 'report', *hupischnoumai* 'promise', *dido:mi* 'give', *komizo:* 'bring', *epistello:* 'send', etc.)
- b. Equating, mixing (*iso:/eksiso:* 'equate', *eikazo:* 'gather, presume', *meignumi* 'mix', etc.)
- c. Complex verbs with the prepositions *epi-* 'on', *en-* 'in', *sun-* 'with' (*epitasso:* 'assign/enjoin', *epitrepo:* 'entrust/transfer', *energazomai* 'create, produce', *ksugcho:ro:* 'give up something for someone', etc.)

The verb classes in 16 take a genitive and an accusative object.

(16) Genitive IO – Accusative DO

(for example, *estio tinos ti* 'feed someone (GEN) with something (ACC)')

- a. Feeding, filling, emptying (*estio:* 'feed', *ple:ro:* 'fill', *keno:* 'empty', etc.)
- b. Prevent, permit, seizing, depriving (*ko:luo:* 'prevent', *pauo:* 'stop', *apotemno:* 'cut off', etc.)
- c. Receiving, driving, attraction (*lambano:* 'receive', etc.)
- d. Listening, learning, informing (*akouo:* 'listen', *manthano:* 'learn', *punthanomai* 'be informed', etc.)

Finally, the verb classes in 17 take a dative IO and a genitive DO.

²⁴ The situation with respect to the availability of PPs as objects of ditransitives starts to change as early as the third century BC, when morphological dative case is beginning to disappear from the system of Greek (Humbert 1930, Luraghi 2003, and Horrocks 2006, among others) and is subsequently replaced by PPs as well as the genitive and the accusative case.

²⁵ This list is not exhaustive since there is another class of ditransitives that take a DP and a clause as their complements, such as verbs that roughly mean the same as *say*, *order*, *hope*, and *urge*. We do not discuss these verbs here for reasons of space.

(17) Dative IO – Genitive DO

(for example, *phthono: tini tinos* ‘envy someone (DAT) for something (GEN)’)

- a. Taking part, transmission (*metecho:/koino:no:* ‘take part in’, *metadido:mi* ‘transmit’)
- b. Concession (*paracho:ro:* ‘concede’, etc.)
- c. The verb *phthono:* ‘envy’

On the basis of the above lists, the following generalizations can be stated concerning the relationships between theta-roles and cases.²⁶

- The prototypical goal verbs have a dative-accusative frame, with the GOAL surfacing as DATIVE.
- Verbs formed with a PREFIX independently assigning dative again have a DATIVE-accusative frame (cf. 6 above with prefixal monotransitives taking dative objects).
- GENITIVE IOs are SOURCES (with receiving and listening verbs) or POSSESSORS (acquiring the theme with feeding/feeling verbs or losing the theme with emptying, preventing, depriving verbs).
- THEME arguments are restricted to ACCUSATIVES.
- With verbs selecting for a dative and a genitive, the DATIVE is the human affected IO and the GENITIVE the (often inanimate) theme DO.

3.4. CASE ALTERNATIONS IN DITRANSITIVES. In a nutshell, both IO and DO objects can, in principle, alternate with nominative in Ancient Greek passivized ditransitives, regardless of their case (DAT, GEN, or ACC). With class (i) verbs, only the accusative IO/goal argument alternates, and not the accusative DO/theme. With verbs of classes (ii) and (iii), both the IO and the DO can, in principle, alternate,²⁷ while for class (iv) the data are unclear. Specifically:

(i) With verbs taking two accusative objects (the ACC-ACC CLASS), only the IO can be passivized, we believe for principled reasons that are orthogonal to our main discus-

²⁶ In view of the following generalizations, it is tempting to speculate that the different Case patterns reflect different underlying structures or different applicative heads (see Anagnostopoulou 2001, 2003, 2005b, Pykkänen 2002 for discussion of different types of ditransitives and applicatives within and across languages). In this article, we do not go into this issue, which necessitates further research and is largely orthogonal to our present discussion of Case alternations. However, it is worth noting that verbs of the GEN-ACC class are highly reminiscent of Pykkänen’s (2002) ‘low source applicatives’. Verbs belonging to the DAT-ACC class are, in principle, amenable either to a low recipient applicative analysis or to a high applicative analysis where the IO is assigned a recipient/affected role. The low analysis seems particularly plausible for prefixal verbs taking DAT-ACC complements. Note that Ancient Greek productively employs ‘free/adjunct-like’ benefactive, malefactive, and experiencer datives, as well as a dative traditionally called *dativus iudicantis* ‘dative of reference’ (see e.g. Luraghi 2003:63–65); these would qualify as high applicatives, but it is unclear whether they alternate. Moreover, note that the distinction between ‘teach’, which selects for two accusatives, and ‘give’, which selects for a dative and an accusative, also exists in Modern Greek (see Anagnostopoulou 2001). As a matter of fact, as noted by a referee, the double accusative pattern with verbs meaning ‘teach’ is actually quite widespread, at least within Indo-European. German also follows it (e.g. with *lehren*), in spite of the fact that verbs with two accusative objects are otherwise extremely uncommon in the language. Finally, we would also like to point out that some of the verbs listed in 14–17 do not have ditransitive verb equivalents in English and other languages, while others do. In the main text, we provide and discuss examples with verbs that have good ditransitive equivalents in other languages (we thank a referee and Heidi Harley for their feedback concerning this point).

²⁷ Ditransitives allowing both the IO and the DO to surface as subjects in passives are usually said to give rise to ‘symmetric passives’ and are discussed in the literature in relation to Japanese (Miyagawa 1997 and many others), Swedish and Norwegian (Holmberg & Platzack 1995), British English (Baker 1988, Woolford 1993, Haddican 2010), and Kinyarwanda (Baker 1988). See §4 below for further discussion.

sion of Case alternations.²⁸ Smyth (1920:396) states that ‘in double accusative constructions, the object that denotes the *person* is the one that turns into nominative in passives’.

(18) a. Active: ACC-ACC

Hon ouk edidax-an **kalon** **ouden**
 who.ACC not teach-3PL.AOR.ACT good.ACC no.ACC
 ‘He, whom they have not taught anything good’

b. Passivized: NOM-ACC

Hos ouk edidachth-e: **kalon** **ouden**
 who.NOM not teach-3SG.AOR.PASS good.ACC no.ACC
 ‘He, who has not been taught anything good’ (Herodotus, *Historia* 3: 81)

(ii) Either the IO or the DO may turn into nominative under passivization with verbs taking a dative IO and an accusative DO (the DAT-ACC CLASS). Examples of DAT-NOM alternations are provided in 19 and 20.²⁹

²⁸ A similar asymmetry between ACC-ACC verbs and GEN/DAT-ACC verbs obtains in Modern Greek (Anagnostopoulou 2001, 2003) and German (Alexiadou et al. 2014). In double accusative ditransitives formed with the verbs ‘teach’, ‘serve’, ‘pay’, and ‘feed’ in Modern Greek and *lehren* ‘teach’ in German it is absolutely impossible for the theme to surface as a nominative subject in passives containing an accusative goal. Anagnostopoulou (2001) argues that these verbs in Modern Greek do not include an applicative head, the accusative goal is an argument of the verbal root, and the theme argument has the status of an adjunct modifying an abstract theme incorporating into the root: it is therefore immobile. Anagnostopoulou argues that this analysis extends to English *teach*, *pay*, *serve*, *feed*. She points out that English also shows an asymmetry between verbs like *give* and verbs like *teach* with regard to passivization: theme passivization in the presence of a DP goal is much worse with *teach* than with *give* and does not improve when the goal is pronominalized, unlike *give*-verbs. The hypothesis that double accusative verbs in Modern Greek and their English counterparts are not applicatives explains why they can have an accusative DP goal as their sole complement and may form adjectival passives with the goal as a subject in both English (Levin & Rappaport 1986) and Modern Greek. By contrast, with verbs like ‘give’, ‘send’, ‘tell’, and so forth—which are applicatives—selecting for a genitive IO and an accusative DO in Modern Greek, a dative IO and an accusative DO in German, and two DPs with no overt morphology in English, the goal is introduced by vAPPL, and the accusative DO is a true argument of the root, which can therefore surface as a nominative subject in passives. In Modern Greek, the higher genitive IO (which retains its Case obligatorily, unlike Ancient Greek) undergoes clitic doubling when the DO undergoes movement to Spec,TP, surfacing as nominative, for locality reasons (see Anagnostopoulou 2001, 2003 for extensive discussion).

²⁹ A referee wonders whether we can find both the dative and the accusative object alternating with nominative in passivization WITH ONE AND THE SAME VERB. Our reply is that this is what we expect to find on the basis of what we know from other languages with symmetric passives. In our corpus search so far, we have identified three verbs that can be shown to be truly symmetrical in the sense pointed out by the referee: *epitasso*: ‘assign/enjoin’, *epitrepo*: ‘entrust/transfer’, and *dido:mi* ‘give’. The first two are prefixal verbs. In the main text, we see the former exhibiting the DAT-NOM alternation in 19. Now consider the following example (we omit the active counterpart of the example in question, since the active frame is presented in 19a).

(i) Ho stratos epitachthe:s ekastoisi
 the fleet.NOM assign.PTCP.PASS each.DAT.PL
 ‘The fleet (that was) assigned to each’

(Herodotus, *Historia* 6: 95)

Example (i) exemplifies passivization of the DO, while 19b exemplifies passivization of the IO, both with the verb *epitasso*:. Contrast also 20 and 22 in the main text: the former exemplifies passivization of the IO with the verb *dido:mi*, while the latter passivization of the DO with the same verb. Our main empirical point is that all cases in Ancient Greek can alternate with nominative in passivization, and these data in addition show that there are indeed verbs that are entirely symmetrical, exhibiting passivization of both the IO and the DO. As already mentioned, our suspicion is that all truly ditransitive verbs falling under the GEN-ACC and DAT-ACC classes will turn out to be truly symmetrical, because we see no immediate reason why the symmetrical behavior should be limited to *epitasso*:, *epitrepo*:, and *dido:mi*. As far as we know from other languages, a language either has the option to move the lower object across the higher one in applicatives or not. See Anagnostopoulou 2003 and many others for discussion. But notice that our main point about Case alternations will not be affected even if it turns out that there are some verbs in these classes that are truly symmetrical and others that are not.

DAT-NOM ALTERNATIONS

(19) a. Active: ACC-DAT

All-o ti meiz-on **hum-in** epitaks-ousin.
 something.else-ACC bigger-ACC you-DAT order-3PL.PRS.ACT
 ‘They will order you to do something else bigger/greater.’

b. Passivized: ACC-NOM

All-o ti meiz-on **hum-eis** epitachthe:s-esthe.
 something.else-ACC bigger-ACC you-NOM order-2PL.PRS.PASS
 ‘You will be ordered to do something else, bigger.’

(Thucydides, *Historia* I: 140. 5)

(20) a. Active: ACC-DAT

De:marato-s edo:s-e **aut-o:i do:ro-n.**
 Demaratos-NOM give-3SG.AOR.ACT him-DAT present-ACC
 ‘Demaratos gave him a present.’

b. Passivized: NOM-ACC

houto-s d’edo:th-e: **do:ron** men hupo De:marat-ou.
 he-NOM give-3SG.AOR.PASS gift.ACC then by Demaratos-GEN

‘He was given a gift by Demaratos.’ (Diodorus Siculus, *Historia* 17: 76. 6)

Examples where accusative DOs become nominative are presented in 21 and 22.

ACC-NOM ALTERNATIONS

(21) a. Active: ACC-DAT

Epitrep-o: **te:n phulak-e:n toisi.**
 entrust-1SG.PRS.ACT the guard-ACC they.DAT
 ‘I entrust the guard to them.’

b. Passivized: DAT-NOM

Toisi epetrapt-o **he: phulak-e:.**
 they.DAT entrust-3SG.PRS.PASS the guard-NOM

‘The guard is entrusted to them.’

(Herodotus, *Historia* 7: 10)

(22) a. Active: DAT-ACC

Ekein-o:i edok-e **aut-e:n te:n cho:ra-n.**
 he-DAT give-3SG.AOR.ACT this-ACC the land-ACC
 ‘He gave this land to him.’

b. Passivized: DAT-NOM

Ekein-o:i aut-e: he: chora edoth-e:.
 he-DAT this-NOM the land.NOM give-3SG.AOR.PASS

‘This very land was given to him/that man.’ (Xenophon, *Historia* III: 1. 6)

(iii) When the verb takes a genitive IO and an accusative DO (the GEN-ACC class), the situation is as with DAT-ACC verbs: arguments bearing both cases (IOs and DOs) alternate. An example of a GEN-NOM alternation is provided in 23 and an ACC-NOM alternation in 24.

GEN-NOM ALTERNATION

(23) a. Active: GEN-ACC

Apetem-on **to:n strate:g-o:n tas kephal-as.**
 cut.off-3PL.AOR.ACT the generals-GEN the heads-ACC
 ‘They cut the heads from the generals.’

b. Passivized: NOM-ACC

Hoi strate:g-oi apetme:th-e:san **tas kephal-as.**
 the generals-NOM cut.off-3PL.AOR.PASS the heads-ACC

‘The generals were beheaded/The generals had their heads cut off.’

(Xenophon, *Anabasis* II: 6. 29)

ACC-NOM ALTERNATION

(24) a. Active: ACC-GEN

Hout-oi kolu-ousi **tous polemi-ous te:s horm-e:s.**
 they-NOM hinder-3PL.PRS.ACT the enemies-ACC the attack-GEN
 ‘They hinder the enemies with the attack.’

b. Passivized: NOM-GEN

Hoi men polemi-oi te:s horm-e:s eko:luth-e:san.
 the enemies-NOM the attack-GEN hinder-3PL.AOR.PASS
 ‘The enemies were hindered with the attack.’ (Polybius, *Historia* 6: 55. 3)

(iv) Regarding the final class, that is, verbs taking a dative and a genitive object, the situation is unclear. Grammars do not explicitly discuss their passivization patterns, and we have not located any instances of this construction in corpora—unsurprisingly, given how much rarer the passive is than the active. We therefore have to disregard this class for now.

In conclusion, the examples presented above are sufficient to establish that in Ancient Greek both the IO and the DO may become nominative with ditransitives that select for a genitive/dative IO and an accusative DO. That is, all three objective cases (ACC, DAT, GEN) become nominative in ditransitive passives, as in monotransitive ones.

Apart from the occasional mention of the Ancient Greek ditransitive data as outlined in the introduction, Lavidas 2007, 2010 is the only recent work that discusses the paradigm presented in this article, but the author limits the discussion to ditransitives. His main claim is that the fact that the dative can be absorbed in passives of ditransitives constitutes evidence that Ancient Greek nonactive Voice (middle and passive) was still able to assign accusative Case. In this article we provide a different account of the Ancient Greek paradigm, not based on the concepts of Case-assignment and Case-absorption.

4. AN ACCOUNT OF CASE ALTERNATIONS IN ANCIENT GREEK. The puzzle posed by Ancient Greek for current theories of Case is that datives and genitives combine the distribution of inherent/lexical/quirky Cases in actives with the distribution of structural/dependent Cases in passives, qualifying as ‘mixed’ Cases (§4.1). We propose to allow for the parametric availability of alternations of this type within current minimalist Case theory through the hypothesis that alternating datives and genitives bear an uninterpretable Case feature that renders them active for Agree (§4.2). We illustrate how this proposal works for monotransitives and ditransitives (§4.3).

4.1. ANCIENT GREEK ALTERNATIONS AND THEIR IMPLICATIONS FOR THEORIES OF INHERENT/LEXICAL VS. STRUCTURAL CASE. In the GB/minimalist literature, two lines of approaches to Case alternations have been proposed, syntactic ones and morphological ones (see Bobaljik & Wurmbbrand 2008, Pesetsky & Torrego 2011 for recent overviews).

According to standard syntactic approaches, Case alternations take place whenever structural objective Case, realized as accusative in languages with overt case morphology, cannot be assigned (or checked or licensed, that is, in passives and unaccusatives),³⁰ forcing movement of the DP object to the subject position where Nominative can be assigned (checked/licensed) by finite Inflection (due to the CASE FILTER; Vergnaud 2008).

³⁰ Failure to assign structural accusative has been linked to the absence of an external argument (Burzio 1981, 1986), a correlation known as BURZIO’S GENERALIZATION. Kratzer (1996) and Chomsky (1995) propose to express this correlation through the hypothesis that structural accusative Case is licensed by a functional head Voice or *v*, which introduces the external argument. When this head is missing, accusative cannot be assigned and the external argument is absent.

Arguments bearing inherent Case (realized as dative, genitive, instrumental, partitive, etc.) do not enter into comparable alternations because nonstructural Case is licensed in connection to theta-marking and is retained throughout the derivation. What is crucial for the standard approaches is that the identity of particular cases—Nominative, Accusative, Dative, and so on—is linked to particular structural licensing configurations.

Morphological case approaches (m-case approaches; Zaenen et al. 1985, Yip et al. 1987, Marantz 1991, Harley 1995, McFadden 2004; see Bobaljik 2008:297–302 for an overview) argue that the abstract syntactic licensing responsible for the syntactic distribution of DPs (EPP and/or structural Case) does not determine the actual case morphology that DPs bear and should be dissociated from the algorithm determining morphological case realization at the Morphological component. Case alternations are linked to the way in which the syntactic licensing relations established in passives and unaccusatives are interpreted by spell-out hierarchies at PF.³¹ In what follows, we concentrate on how Case alternations with monotransitive and ditransitive verbs have been treated in terms of Marantz's (1991) and Harley's (1995) characterization of the algorithms determining morphological case realization.

Marantz proposes that there are four types of morphological case, assigned via the disjunctive hierarchy in 25. More specific cases take precedence over less specific ones placed lower in the hierarchy.

- (25) Case realization disjunctive hierarchy
- lexically governed case
 - dependent case (accusative and ergative)
 - unmarked case (environment-sensitive; nominative in IPs, genitive in DPs)
 - default case

LEXICALLY GOVERNED/QUIRKY case (dative, genitive, instrumental, partitive, etc.) is the most specific case, as it is idiosyncratically determined by particular lexical items. DEPENDENT CASE (accusative in nominative-accusative languages and ergative in ergative languages) comes next in the hierarchy and is realized in a certain domain in opposition to another argument (higher or lower) not bearing lexical case. Accusative is dependent case downward, realized in opposition to a higher DP not bearing lexical case, while ergative is dependent case upward, realized in opposition to a lower DP not bearing lexical case.

- (26) Dependent case is assigned by V + I to a position governed by V + I when a distinct position governed by V + I is:
- a. not 'marked' (not part of a chain governed by a lexical case determiner)

³¹ Our data are a problem for algorithmic m-case approaches like the ones proposed by Marantz (1991) and Harley (1995), as discussed in the text. Yip, Maling, and Jackendoff's (1987) *Case in tiers* approach, which we do not discuss explicitly in this article, is another algorithmic approach, where case is a morphological property that is assigned to the DPs of the clause postsyntactically, according to a hierarchy or an algorithm. Bobaljik (2008) offers a recent proposal about the interaction between Case and Agreement, where both are argued to be postsyntactic, morphological processes and case on DPs is again decided based on a hierarchy. Note that these approaches are not the only implementations of the idea that case is a morphological phenomenon, as a referee points out. There is a lot of recent work, mostly within the DISTRIBUTED MORPHOLOGY framework (Halle & Marantz 1993), where case is argued to be a morphological phenomenon. McFadden (2004, 2006, 2009) argues for such a system where, roughly speaking, case 'interprets' syntax. McFadden (2006) actually focuses on German dative Case, which he takes not to alternate with nominative in passives (but see Alexiadou et al. 2014). McFadden reaches a conclusion similar to ours, whereby dative is a mixed Case with both lexical and structural properties.

- b. distinct from the chain being assigned dependent case
 (i) Dependent case assigned up to subject: ergative
 (ii) Dependent case assigned down to object: accusative

Unmarked case is unmarked for specific syntactic environments, namely clauses or DPs. The unmarked case in clauses is nominative for nominative-accusative languages and absolutive for ergative languages, while the unmarked case in DPs is genitive. Finally, default case is realized in environments where no other rules can apply. In this system, ACC-NOM alternations arise in contexts not allowing DEPENDENT ACCUSATIVE assignment due to the absence of a higher DP bearing environment-sensitive nominative, that is, in passives and unaccusatives. This is schematized in 27.

- | | |
|-------------------------------|-------------------------|
| (27) a. Subj kissed Obj | b. was kissed Obj |
| — | — |
| ACC | ACC |
| NOM | NOM |

In the transitive (27a), there are two DPs requiring m-case, the subject and the object. The first case in the hierarchy is lexical, which is unavailable in this example. The next case is dependent, which is assigned on the object in the active (27a), in opposition to the subject. By contrast, dependent case cannot be assigned in 27b, which contains a single argument. In the next step, the caseless subject in 27a and the caseless object in 27b receive environment-sensitive nominative. Note that the object in 27b is eligible to receive nominative in this account, regardless of whether it undergoes EPP-driven movement to the subject position or it stays in its base position. Unlike arguments bearing dependent case, arguments bearing lexically determined cases do not alternate, because lexical case is idiosyncratically assigned by particular lexical items and is always assigned first, winning out over alternative case assignments. Thus, if an object in a configuration like 27 is selected by a verb assigning lexical dative, genitive, instrumental, and so on, this case will not be affected by the presence or the absence of a higher subject and there will be no case alternation comparable to the one in 27a vs. 27b.

Harley (1995) proposes an extension to Marantz's dependent case approach that aims to accommodate the distribution of dative case in contexts where it is regularly and predictably realized, such as ditransitives and causatives. She proposes that dative is canonically realized on the second argument checking a structural Case feature in domains where THREE arguments are eligible to receive m-case, subject to the MECHANICAL CASE PARAMETER in 28 (Harley 1995:161).

(28) MECHANICAL CASE PARAMETER (MCP):

- a. If one case feature is checked structurally in the clause, it is realized as Nominative (mandatory case).
- b. If two case features are checked structurally in the clause, the second is realized as Accusative.
- c. If three case features are checked structurally in the clause, the second is realized as Dative and the third as Accusative.
- d. The mandatory case in a multiple-case clause is assigned in the top/bottom AgrP.

Consider a configuration like 29, containing three objects.

- | | |
|----------------------------------|--------------------------|
| (29) a. Subj gave IO DO | b. was given IO DO |
| NOM | NOM |
| — | — |
| DAT | ACC |
| — | — |
| ACC | ACC |

In the active (29a), there are three arguments checking a structural Case feature in the clause, and case assignment proceeds as specified by 28c in a top-to-bottom fashion, starting from the mandatory nominative (see 28d). The first case assigned is nominative on the subject, the IO comes second and bears dative, and the lowest DO comes third and bears accusative. By contrast, the passivized ditransitive (29b) contains only two arguments since the external argument is absent. Case assignment in this configuration falls under 28b: the higher IO bears mandatory nominative, while the lower DO bears accusative. Building on Sadakane & Koizumi 1995, Harley analyzes two types of Japanese causatives in terms of 28, one in which dative alternates with nominative and one in which dative is preserved (see Harley 1995:152–71 for the details). In order to account for their different behavior, Harley proposes that there are two types of dative Case in Japanese: structural, which enters structural Case checking and falls under the MCP algorithm, and quirky, which does not undergo structural Case checking and does not fall under the MCP.

Note now that Harley's MCP predicts an asymmetry between ditransitives and monotransitives with respect to DAT-NOM alternations. Dative is expected to be realized on an argument checking structural Case only in the former context. If an object surfaces with dative case in monotransitives, then this can only be quirky Case. The system is set up in such a way that dative can be realized by virtue of the MCP only when THREE arguments check structural Case in a clause, that is, in active ditransitives, not when TWO structural Cases are checked, as in active monotransitives. This prediction appears to be borne out in German and Dutch, where, arguably, datives alternate in ditransitives and not in monotransitives (in passives formed with the auxiliaries *bekommen/krijgen* 'become', which are licit only in ditransitives, not in monotransitives; see Alexiadou et al. 2014 for discussion and references).³²

However, other languages do not corroborate this claim. In Japanese passives, the DATIVE GOAL/RECIPIENT/ADDRESSEE argument of ditransitives can become nominative, as is well known.

- (30) a. Naomi-ga Ken-ni labuletaa-o watasi-ta.
 Naomi-NOM Ken-DAT love.letter-ACC hand-PST
 'Naomi handed Ken a love letter.'
- b. Ken-ga Naomi-ni labuletaa-o watas-are-ta.
 Ken-NOM Naomi-DAT love.letter-ACC hand-PASS-PST
 'Ken was handed a love letter by Naomi.' (Ishizuka 2012:61)

Importantly, Ishizuka (2012:82) and Iwasaki (2002) report that in Japanese, the DO of a substantial number of monotransitive verbs is realized not as an accusative DP but as a dative DP, and these datives (*ni*-directional and *kara*-source obliques) can be raised to the nominative position in the passive.

- (31) a. Naomi-ga Ken-ni kisu(-o) sita. (active)
 Naomi-NOM Ken-DAT kiss-ACC do.PST
 'Naomi kissed Ken.'
- b. Ken-ga Naomi-ni kisu(-o) s-are-ta. (passive)
 Ken-NOM Naomi-DAT kiss-ACC do-PASS-PST
 'Ken was kissed by Naomi.'

³² For a comparative discussion of languages that do indeed illustrate this asymmetry in the behavior of monotransitives vs. ditransitives vs. languages that do not, see Alexiadou et al. 2014. Also see Alexiadou et al. 2014 for a slightly different way of characterizing what a 'mixed Case' amounts to.

In §3, we saw extensive evidence that datives alternate in both environments in Ancient Greek (recall examples 8–12, where all cases alternate in monotransitives, and 18–24, where all cases alternate in ditransitives). This is not predicted by the MCP. The additional facts that (i) IOs bear either dative or genitive in Ancient Greek ditransitives and that (ii) genitives also alternate with nominative complicates things even further.

To sum up, Ancient Greek presents a challenge to standard syntactic and morphological approaches to Case, since dative and genitive case have a mixed status. On the one hand, they have the distribution of lexical, quirky, or inherent Cases in actives, but, on the other, they behave like accusatives vis-à-vis passivization. This means that theories of Case must be modified in order to allow for the parametric availability of datives/genitives of this type. We turn to this issue in the next section.

4.2. STRUCTURAL DATIVES AND GENITIVES ENTER AGREE. In current minimalist literature, the difference between structural and lexical/inherent Case has been expressed in terms of their varying licensing conditions. Structural objective Case is licensed by transitive *v* or Voice—that is, a functional head different from *V*, the theta-assigner of the object. By contrast, arguments bearing lexical/inherent Case are licensed by their theta-assigners, *V* or a zero *P* in monotransitives, applicative *v* in ditransitives and, perhaps, certain monotransitives as well. In this vein, McFadden (2006) and McIntyre (2006) propose that there are applicative monotransitives, and Wood (2012) argues that arguments bearing dative case in German and Icelandic are not licensed in a uniform way.

In Chomsky 1995, 2000, 2001, the different licensing conditions of arguments bearing structural and inherent Case are linked to feature interpretability, which, in turn, is linked to the ACTIVITY CONDITION of goals, which enables them to enter the formal operation Agree with designated probes. Structural Case is viewed as an uninterpretable feature (*uCase*) that needs to be checked and eliminated (in Chomsky 1995), and in later literature as the reflex of an uninterpretable *phi*-set on a goal (the presence of which activates the goal), which is erased under matching with the probe (in Chomsky 2000), or as a feature that enters the derivation unvalued and receives its value under Agree (in Chomsky 2001). Inherent Case is interpretable (*iCase*), valued, and so forth, and is therefore inactive and does not enter Agree, though inactive elements may cause defective intervention effects.

As mentioned in §1, crosslinguistically there are also ‘in between’ cases, namely, when certain arguments behave as if they simultaneously have structural and lexical Case. A famous example in the literature comes from Icelandic, where quirky subjects display all of the syntactic effects standardly attributed to arguments bearing structural Case, and yet they retain their idiosyncratically determined case morphology, they do not alternate with nominative in passives, and they do not enter agreement with the inflected verb (Zaenen et al. 1985, Marantz 1991, Bobaljik 2008, and others). To account for them, Chomsky (1995) and McGinnis (1998) propose that quirky subjects in Icelandic bear inherent Case and have an additional structural Case feature. A different type of example illustrating the mixed behavior of dative arguments comes from Basque. Rezac (2008) investigates dative agreement in Basque and argues that dative arguments in different dialects of Basque are either totally opaque or transparent for Agree. Transparent datives enter Agree with the inflected verb for more or fewer *phi*-feature specifications, depending on the dialect, a fact showing that the degree to which dative arguments enter Agree is an additional point of crosslinguistic variation. Rezac argues that the variability in the behavior of datives is due to their status as PPs, which renders them opaque because PPs are phases (Abels 2003). Dative PPs can be transparent when a *phi*-probe on *P* is present, which enters Agree with the DP selected by *P*,

transmitting the phi-features of this DP outside the opaque PP domain. The result is AGREE TRANSPARENCY.

Ancient Greek provides evidence that there is a link between the presence of dative case and the presence of a P head assigning it, but it also provides evidence that the transparency of alternating dative PPs has a different source. Recall from §3 that monotransitive and ditransitive complex verbs formed with prepositions assigning dative case—such as *en-*, *sun-*, *epi-*, *para-*, *hupo-*, and the adverb *omou*—inherit from the prepositions their dative-assigning capacity. At least for verbs of this class it is plausible to propose that they are formed by preposition incorporation. This results in a configuration where the complex verb has a PP complement headed by the trace of the incorporated preposition, exactly as proposed by Baker (1988:Ch. 5) for applicative constructions in Bantu languages. Moreover, the preposition incorporation data reveal that there is a link between preposition incorporation and Agree, since the dative complements of the incorporated prepositions have been seen in §3 to alternate. Crucially, it is the process of preposition incorporation itself that makes the PPs in question transparent.³³ If PPs are phases, then the phase-lifting effect of P-incorporation follows from the hypothesis that movement of certain phase heads extends the phase to the higher projection (Gallego 2006, 2010, Gallego & Uriagereka 2006, den Dikken 2007, Wurmbrand et al. 2012), in the spirit of Baker's 1988 GOVERNMENT TRANSPARENCY COROLLARY. It is unclear, however, whether this treatment generalizes to all dative-assigning monotransitive and ditransitive verbs and to all genitive-assigning monotransitive and ditransitive verbs. Even though it is often assumed in the literature that morphologically marked arguments bearing oblique cases are PPs,³⁴ it has also been argued that not all dative and genitive objects have the same structural analysis. Datives can be PPs headed by a zero P (Rezac 2008, Pesetsky 2013; see Wood 2012 for some Icelandic datives), PPs or DPs introduced by an applicative head (Anagnostopoulou 2005b for ditransitives in Greek and Romance; Cuervo 2003 for ditransitives in Spanish and Romance; McFadden 2006, McIntyre 2006 for monotransitives in German; Wood 2012 for ditransitives in Icelandic), or DPs introduced by the verb (see Wood 2012 and §5 below for Icelandic dative themes in monotransitives).

In view of the above considerations, we propose, following Chomsky (1995, 2000, 2001), that opaque dative and genitive arguments are inactive for Agree. By contrast, transparent dative and genitive arguments are active for Agree. We furthermore assume that active dative and genitive arguments have an uninterpretable Case feature (uCase), which enters Agree with a functional head, Voice or T, unlike inactive/inert dative and genitive arguments.³⁵ As will be seen immediately, there are several formal ways of capturing the inactivity of inherent datives/genitives.

According to Conti (1998), the phenomenon of DAT-NOM and GEN-NOM alternations in Ancient Greek monotransitives diachronically evolved in close connection to

³³ We thank Heidi Harley for her comments about P-incorporation in Ancient Greek.

³⁴ See, for example, Pesetsky (2013:7), who argues that 'a dative, instrumental, prepositional or locative-marked word bears an affix of category P'.

³⁵ Looking at the incorporation cases from this perspective, Heidi Harley (p.c.) suggests that P-incorporation could be connected to P's loss of an interpretable Case feature to assign. If this correlation is correct, then it is expected that P-incorporation was not productive in Homer and it became productive in Classical Greek. From a preliminary search of the relevant data, this seems to be confirmed. Most of these prefixed verbs, monotransitive and ditransitive, are not attested at all in Homer. Exceptions are the monotransitive verbs *epikouro*: 'help' and *epicheiro*: 'try' and the ditransitive verb *epitrepo*: 'allow'. The monotransitive ones are attested once and twice, respectively (only the latter with a dative complement). The ditransitive *epitrepo*: is attested several times in actives and once in a middle construction featuring a nominative theme and a dative goal.

gradual changes in the case system of the language. Initially, each morphological case had a range of well-defined semantic interpretations, and DAT-NOM and GEN-NOM alternations did not occur. Later on, the one-to-one correspondence between form and meaning was obscured, and different cases came to look as if they were idiosyncratically selected by particular verbs, resulting in a situation where close semantic functions were expressed through different cases. With verbs expressing an action controlled by the subject and directed toward an object, the partitive genitive and the dative expressing participation had a meaning close to the accusative; the core meaning in all three situations was that of an object affected by the event expressed by the verb. The genitive differed from the accusative with regard to partial vs. total affectedness, and the dative differed from the accusative with regard to animacy and type of involvement (datives often expressed persons or things particularly affected by the action expressed by the verb). DAT-NOM and GEN-NOM alternations started taking place at the stage where the two cases, genitive and dative, acquired a meaning close to the meaning of the accusative. This, according to Conti, explains why the process started with partitive genitives: their meaning was closer to the meaning of accusative than that of datives expressing participation. It also explains why instrumental dative objects began to alternate later than datives expressing participation: instrumental datives have a meaning more remote from the accusative than participation datives.

Conti's detailed documentation of how the phenomenon developed over time provides a key to understanding what it means to proceed from a system where genitive and dative arguments are fully inherent to a system where they qualify as structural. At the former stage, genitives and datives were associated with a particular meaning ('inherent'). Gradually, however, they lost their distinctive interpretations and acquired meanings that were very close to those of structural accusative DPs, which were licensed by functional heads in the vP spine. At that stage, they were reanalyzed as bearing an uninterpretable Case feature, a change that was then gradually generalized to more types of genitive and dative arguments (though not all; see §3 above for the observation that ablative genitive objects and comitative or locative datives were never alternating).

But what was the status of datives and genitives before they came to possess a uCase feature, and, more generally, what is the formal difference between datives and genitives that do not enter Agree and those that do? As a first approximation, this difference can be expressed as an iCase vs. uCase opposition, following Chomsky. The transition Conti describes can then be viewed as a transition from a system where datives/genitives bear iCase to a system where they bear uCase, a hypothesis clearly supported by the semantic differences she describes. In turn, this transition can be made to follow from the PRINCIPLE OF FEATURE ECONOMY in 32 invoked by van Gelderen (2008a,b, 2009, 2011) in order to explain cyclical diachronic change in a number of different empirical domains.³⁶

- (32) FEATURE ECONOMY:³⁷ Minimize the semantic and interpretable features in the derivation, for example: Semantic > [iF] > [uF]

³⁶ We thank Heidi Harley for drawing our attention to the relevance of van Gelderen's work.

³⁷ Note that it is not clear how to express in Rezac's system the diachronic change, described by Conti (1998), from the period of Homer, where datives were opaque, to Classical Greek, where datives became transparent. We would have to assume that features are added on the P head, while usually diachronic change is explained through feature loss (Roberts 2007).

Van Gelderen argues that semantic features are not economical in the computation since they make the elements they combine with computationally inert. Interpretable features are slightly more economical in their interactions since they can value uninterpretable features. Finally, uninterpretable features act as probes and are the most economical in keeping the derivation going.

But note that an analysis in terms of an iCase vs. uCase opposition makes the most sense if both types are assumed to be DPs, and this is incompatible with the evidence from verbs with incorporating prefixes, which shows that at least one group of structural datives in Ancient Greek are PPs active for Agree due to the process of P incorporation. For these datives at least, we must assume that they are PPs, and we could generalize this treatment to more datives, analyzing the inherent vs. structural opposition as a PP vs. DP difference. When, on the one hand, datives/genitives are DPs, they bear uCase. When they are PPs, on the other hand, they are opaque, because the DP bearing uCase is embedded under P. PPs can become transparent, though: via P-incorporation, as with Ancient Greek prefixal verbs, or when P bears a phi-probe, as Rezac (2008) suggests. See Alexiadou et al. 2014, which argues that the auxiliaries *bekommen* and *krijgen* in German and Dutch passives showing a DAT-NOM alternation also result from the P-incorporation strategy. As a final note on this issue, observe that if an analysis in terms of PP opacity is generalized to all inherent datives, then the postulation of an iCase feature becomes superfluous. As pointed out by a referee, this might be a welcome result, because expressing the difference between inherent and structural datives as a PP-DP distinction makes it easier to ensure the right distribution of transparent and opaque datives in terms of c-selection. In the iCase proposal, it is not easy to prevent inserting a DP with an interpretable case feature in one of the contexts where transparency is found.

As a final step, we propose that the abstract Agree relation between DPs and functional heads in the clause is indirectly reflected on the actual case morphology that arguments bear, following m-case approaches.³⁸ More specifically, objects entering Agree due to the presence of an uninterpretable Case feature [uCASE] have structural case in the sense of Marantz (1991) and Harley (1995). We propose the following rules for m-case spell-out in Ancient Greek.³⁹

- (33) a. [uCASE] → NOM iff the DP is not c-commanded by another structurally Case-marked DP (within the domain of finite T).
 b. [uCASE] → DAT iff the DP is c-commanded by another structurally Case-marked DP within the domain of finite T and is sister to verb1, verb2, verb3, preposition1, preposition2 ...
 c. [uCASE] → DAT iff the DP is c-commanded by another structurally Case-marked DP within the domain of finite T and is m-commanded by applicative v1 (benefactive/goal).

³⁸ The reason why we are adopting an m-case approach is because it is simpler than a syntactic approach, especially when it comes to Case alternations in ditransitives that would necessitate more stipulations in a purely syntactic approach.

³⁹ Following a suggestion by Heidi Harley, who suggested an expansion of the dependent case spell-out rules to include context-dependent conditioning. As is discussed in §5 below, these rules are assumed to specifically describe Ancient Greek, a language where nominative case is mandatory in the sense of Harley 1995 and Alexiadou & Anagnostopoulou 2006. In other languages, such as Icelandic, nominative is not a mandatory but rather an elsewhere/default case. As a result, there are environments where (alternating) dative surfaces as dative in the absence of a higher structurally marked DP.

- d. [uCASE] → GEN iff the DP is c-commanded by another structurally Case-marked DP within the domain of finite T and is sister to verb₄, verb₅, verb₆, preposition₃, preposition₄ ...
- e. [uCASE] → GEN iff the DP is c-commanded by another structurally Case-marked DP within the domain of finite T and is m-commanded by applicative v₂ (source/possession).
- f. [uCASE] → ACC iff the DP is c-commanded by another structurally Case-marked DP within the domain of finite T.

The rules in 33 express the fact that DAT and GEN are more specific forms than ACC. They are conditioned by the same environment that conditions accusative assignment, with an additional condition that takes into account the closest relevant verb or applicative v or P. Being more specific, dative and genitive block the assignment of accusative, which is the elsewhere case assigned to objects whenever the conditions for the more specific forms do not apply. Thus, 33 on the one hand expresses the ‘irregular’ distribution of dative and genitive, as opposed to the regular distribution of accusative objects in actives, and on the other hand captures the fact that all three cases alternate with nominatives in passives.

A last note is necessary concerning the question of how to best characterize the distinction between alternating datives and genitives in Ancient Greek monotonatives and ditransitives and quirky datives and genitives in Icelandic, which undergo EPP-driven movement to subject position, retaining their case morphology. Following Rezac (2008) we propose that quirky datives/genitives are PPs entering partial Agree, which, in turn, depends on the ACCESSIBILITY of the phi-features they contain (see Rezac 2008 and Béjar 2008 for proposals to derive partial vs. complete Agree from differences in the feature structures of the relevant probes). In the calculation of dependent case assignment at PF, quirky case qualifies as ‘lexically governed’ case (see Marantz 1991 and Bobaljik 2008 for extensive discussion), despite entering partial Agree. This entails that only dative and genitive DPs entering COMPLETE Agree qualify as dependent cases in the sense of 33.

4.3. AGREE AND M-CASE IN MONOTRANSITIVES AND DITRANSITIVES. Let us now illustrate how the analysis sketched above works. Starting from monotonatives, we assume that T and Voice enter Agree with arguments carrying [uCASE]. In actives, T enters Agree with the external argument (EA in 34 below), and Voice Agrees with the internal argument, as shown in 34a. In passives, the phi-features on passive Voice are inactive, and the object enters Agree with T, as illustrated in 34b.

- (34) a. [_{TP} T [_{uφ}] [_{VoiceP} EA [_{iφ}, **uCASE**] Voice [_{uφ}] [_{VP} V DP [_{iφ}, **uCASE**]]]] (active)
- b. [_{TP} T [_{uφ}] [_{VoiceP} Voice_{PASS} [_{VP} V DP [_{iφ}, **uCASE**]]]] (passive)

Consider now the examples in 9, repeated from above.

(9) DAT-NOM

- a. *Athe:nai-oi epibouleu-ousin he:m-in.*

Athenians-NOM betray-3SG.PRS.ACT US-DAT

‘The Athenians are betraying us.’

- b. *He:m-eis hup’ Athe:nai-o:n epibouleu-ometha.*

we-NOM by Athenians-GEN betray-1PL.PRS.PASS

‘We are betrayed by the Athenians.’

(Thucydides, *Historia* I: 82. 1)

In 9a the object *he:m-in* enters Agree with Voice, and its [uCASE] feature is spelled out as DAT by 33b. The EA *Athe:nai-oi* enters Agree with T, and its [uCASE] feature is

spelled out as NOM by 33a. In the passive 9b, rule 33b does not apply since *he:m-eis* is not c-commanded by another structurally Case-marked DP in the domain of T; its [uCASE] feature is spelled out as NOM by 33a. In a similar manner, active examples where the object bears GEN are subject to 33a and 33d, and examples where the object surfaces with ACC are subject to 33a and 33f. The single argument in passives is assigned NOM by 33a.

Proceeding to ditransitives where both cases, DAT/GEN of the IO and ACC of the DO, are allowed to alternate, we propose that Voice enters Agree with BOTH the IO and DO under MULTIPLE AGREE. Multiple Agree as a way to license two goals by a single probe in ditransitives has been independently proposed by Anagnostopoulou (2005a) and by Nevins (2007) for languages showing PERSON-CASE CONSTRAINT effects. Baker (2008, 2011) also proposes that Voice enters Agree with both the IO and the DO in ditransitives. Under the Multiple Agree proposal, the φ of Voice in 35a enters Agree with both the DAT and the ACC arguments. We assume that the IO and the DO are contained in an applicative phrase (AppIP), remaining agnostic about whether this is a high or a low applicative in the sense of Pylkkänen (2002). The two objects entering Agree are then assigned dependent case at PF since they are c-commanded by a higher structurally Case-marked DP in the domain of T: DAT is assigned in opposition to the higher EA falling under 33c, and ACC is assigned in opposition to the higher DAT falling under 33f. In passives, Voice is defective (and nonphasal) in not introducing an EA and not containing a phi-probe. The two arguments thus enter Multiple Agree with T.

- (35) a. [_{TP} T [φ] [_{VoiceP} EA[i φ , uCASE] Voice [φ] [_{AppIP} IO[i φ , uCASE] vAPPL
[DO[i φ , uCASE]]]]] (active)
 b. [_{TP} T [φ] [_{VoiceP} Voice_{PASS} [_{AppIP} IO[i φ , uCASE] vAPPL [DO[i φ ,
uCASE]]]]] (passive)

In the absence of an external argument in passives, one of the two dependent cases (ACC or DAT) cannot be assigned in opposition to a higher position, and the argument that would bear it therefore surfaces with environment-sensitive NOM. The other argument bears the dependent case (DAT/GEN or ACC) that it also bears in the corresponding active, in opposition to the higher NOM argument (the derived subject). We still need an ALGORITHM to decide which argument will surface with nominative and which with dependent accusative or dative in 35b. The simplest decision mechanism would be locality: the FIRST dependent case cannot be assigned, and the higher argument surfaces with nominative. The SECOND/LOWER argument bears dependent case in opposition to the higher NOM. Assuming that the underlying order of arguments is IO > DO, as in 35, this makes NOM > ACC passives of ditransitives, as in 19b repeated from above, easy to handle.⁴⁰

- (19) b. **All-o ti** meiz-on **hum-eis** epitachthe:s-esthe.
 something.else-ACC bigger-ACC you-NOM order-2PL.PRS.PASS
 ‘You will be ordered to do something else, bigger.’

(Thucydides, *Historia* I: 140. 5)

NOM > DAT/GEN passives of ditransitives, as in 36 (see n. 29), are more difficult to analyze. Something extra needs to be stated in order to account for them.

⁴⁰ We are assuming that the surface ACC > NOM order in 19b results from scrambling of the ACC across the NOM from an underlying NOM > ACC order.

- (36) Ho stratos epitachthe:s ekastoisi
 the fleet.NOM assign.PTCP.PASS each.DAT.PL

‘The fleet (that was) assigned to each’

(Herodotus, *Historia* 6: 95)

This is a general problem for all theories dealing with locality in languages that allow the DO to move across the IO. See Ura 1996, McGinnis 1998, Anagnostopoulou 2003, 2005b, and Haddican 2010, among others, for some proposals. Anagnostopoulou (2003:215–20), building on an observation by den Dikken (1995:207–8), specifically appeals to scrambling of the intervening IO in order to account for the grammaticality of *worden*-passives in Dutch. Since Ancient Greek had extensive scrambling, as pointed out in §2.2, it is possible that the IO scrambling strategy is employed in cases where the DO raises to T, obviating the locality effect. Another possibility is to appeal to the availability of inverse DO > IO orders (we actually see them in some of the ditransitive examples in §3, e.g. 19, 24), either as alternative base orders (see Anagnostopoulou 2003: 117–29 based on Collins & Thráinsson 1996 on the so-called ‘inversion’ constructions of Icelandic) or as alternative orders derived from local movement of the DO to an outer specifier of the vAPPL introducing the IO. See Anagnostopoulou 2003:151–61, 2005c for symmetric double object languages like Swedish and Norwegian, which show such orders under object shift, unlike nonsymmetric Danish, which never permits them. See also Haddican 2010, which builds on this account for symmetric British English. In such DO > IO serializations, the DO is closer to T than the IO, and it is expected to enter Agree first, surfacing as nominative. Other options are also discussed in the literature cited above. In order to choose among the various possibilities for Ancient Greek, we would have to closely investigate the relevant environments. This is a separate project, though, which we hope to be able to address in future work on Ancient Greek ditransitives and their diachronic evolution.

Before we conclude, we would like to briefly consider an alternative possibility to account for the data presented here. One could propose that Ancient Greek nonactive Voice, spelled out as middle and passive, has the capacity of absorbing dative Case as a LANGUAGE-SPECIFIC PROPERTY (following and modifying a proposal by Papangeli (2004) and Reinhart and Siloni (2005)). This hypothesis receives independent support from the observation that dative benefactive arguments can arguably be absorbed by the middle morphology in ‘indirect reflexivity’ constructions of the type illustrated in 1. In such an analysis, dative reflexivization and dative alternations in passives would be treated on a par. Even though this hypothesis is plausible, we have not pursued it further for the following reason: the diachrony of Greek shows that dative reflexivization and dative absorption in passives do not temporally coincide (Lavidas 2007, 2010). More specifically, Ancient Greek lost dative reflexivization constructions in the period of Koiné, while it retained the option of DAT-NOM alternations at that stage. DAT-NOM and GEN-NOM alternations were lost much later, in the period where monotransitive predicates could no longer assign dative and genitive to their objects, namely in Medieval Greek.

In the next section, we compare the Ancient Greek pattern to a very different pattern of DAT-NOM and GEN-NOM alternations attested in Icelandic.

5. TWO DIFFERENT PATTERNS: ANCIENT GREEK VS. ICELANDIC. Ancient Greek DAT-NOM and GEN-NOM alternations show three characteristic properties. The first two are clear from the previous discussion; the third one can be deduced from the lists of monotransitive verbs assigning dative and genitive (cf. 6–7).

- (37) Characteristics of DAT-NOM and GEN-NOM alternations in Ancient Greek:
- a. Dative and genitive alternations take place in passives.
 - b. The dative and genitive affected in ditransitives is the case of the IO. The DO generally surfaces with ACC in Ancient Greek ditransitives.⁴¹
 - c. Dative and genitive are assigned to—and absorbed from⁴²—objects of monotransitives that are human/animate, partially affected, not measurers, never themes of motion, never objects of causative verbs.

As is discussed in this section, although Icelandic too exhibits DAT-NOM and GEN-NOM alternations, it presents a very different system, the specific characteristics of which are given in 38.

- (38) Characteristics of DAT-NOM and GEN-NOM alternations in Icelandic:
- a. DAT-NOM and GEN-NOM alternations never happen in passives. They occur in *-st* middles, certain anticausatives, and adjectival passives.
 - b. The dative alternating in ditransitives is never the case of the IO. The DO may surface with (alternating) DAT in Icelandic ditransitives.
 - c. Themes of motion and objects of causative monotransitive verbs may bear dative case. The dative or genitive ‘absorbed’ in constructions showing Case alternations is the Case of themes.

We argue that the differences between Ancient Greek and Icelandic reduce to three factors. (i) In Ancient Greek, dative and genitive arguments enter complete Agree, regardless of whether they are PPs or DPs. By contrast, only DP datives and genitives enter complete Agree in Icelandic. (ii) Two different heads in the vP domain enter Agree with alternating dative/genitive arguments in the two languages, *v* in Icelandic vs. Voice in Ancient Greek (see also Alexiadou et al. 2014). (iii) In Icelandic, nominative functions as an ‘elsewhere’ case in the domain of the finite clause, unlike Ancient Greek where nominative is a mandatory case.

5.1. ICELANDIC DAT-NOM ALTERNATIONS AND THEIR DIFFERENCES FROM ANCIENT GREEK. It is well known that Icelandic has morphologically distinct nominative, accusative, dative, and genitive case. Even though the majority of objects bear accusative case (accusative is said to be the DEFAULT case for objects, just as nominative is the default case for subjects; see Maling 2002a for discussion and references), nominative, genitive, and dative also occur on objects (for examples see Thráinsson 1979 and many others), and dative objects are very common (Maling 2002a,b, Barðdal 2001).⁴³ There are three differences between Ancient Greek and Icelandic alternations that we discuss in turn.

DIFFERENCE (i): As extensively discussed in the literature on Icelandic, the main environment where dative becomes nominative is *-st* MIDDLES, as in 39a,b (see Sigurðsson 1989, 2009, 2011, Anderson 1990, Zaenen & Maling 1990, Svenonius 2002, Schäfer 2008, Wood 2012).

- (39) a. Ég týndi úrinu.
 I.NOM lost the.watch.DAT
 ‘I lost the watch.’

⁴¹ Except for the DAT-GEN class, which we are disregarding here since we have no evidence concerning passivization.

⁴² ‘Absorption’ and ‘assignment’ are employed here as descriptive terms.

⁴³ Genitive objects are considerably less frequent than dative objects (see Wood 2012 for discussion and references). Similarly to Ancient Greek, Icelandic has both DAT-NOM and GEN-NOM alternations.

- b. **Úrið** týndi-st.
 the.watch.NOM lost-MID
 ‘The watch got lost.’

An important difference between the middle and the periphrastic passive in Icelandic is that the former does not imply agency while the latter does (see Sigurðsson 1989 for detailed discussion). For example, middles do not license ‘by’-phrases (40c), while periphrastic passives do (40b) (Sigurðsson 1989:268, Svenonius 2006).

- (40) a. **Lögreglan** drap hundinn.
 the.police.NOM killed the.dog.ACC
 ‘The police killed the dog.’
 b. **Hundurinn** var drepinn (af lögreglunni).
 the.dog.NOM was killed by the.police
 ‘The dog was killed by the police.’
 c. **Hundurinn** drap-st (*af lögreglunni).
 the.dog.NOM killed-MID by the.police
 ‘The dog got killed.’

Moreover, there are two groups of anticausatives in Icelandic (Zaenen & Maling 1990:143f.): those in which theme objects alternate, and those in which they retain their Case. Similarly to accusative objects, dative objects alternate with nominative in anticausatives falling under the former category, as illustrated in 41a,b. Crucially, passives never show a comparable alternation—that is, DAT is retained in the passive based on ‘sink’ (41c).

- (41) a. **Skipstjórinn** sökkta **skipinu**.
 the.captain.NOM sank the.ship.DAT
 ‘The captain sank the ship.’
 b. **Skipið** sökk.
 the.ship.NOM sank
 ‘The ship sank.’
 c. **Skipinu** var sökkta af skipstjóranum.
 the.ship.DAT was sunk by the.captain
 ‘The ship was sunk by the captain.’

In contrast, passives are the typical environment where the DAT-NOM alternation takes place in Ancient Greek, in the sense that there is no agentivity restriction in the environments where DAT-NOM and GEN-NOM alternations take place.⁴⁴

⁴⁴ DAT-NOM alternations in Ancient Greek would be claimed to be very similar to DAT-NOM alternations in Icelandic if we adopted a proposal by Lavidas (2007, 2010) that Ancient Greek lacks a true passive in the sense of lacking a Voice head [+passive] (see e.g. Lavidas 2007:Ch. 7 for detailed argumentation). Lavidas’s proposal crucially relies on the observation that ‘by’-phrases can also accompany morphologically active verbs with a ‘passive meaning’, as was seen in §2.1, example 5. One could attempt to pursue the idea that ‘dative absorption’ in both Ancient Greek and Icelandic happens in environments lacking a Voice [+passive], which, in turn, would entail that the defining property of Voice [+passive] is the absorption of accusative case exclusively (a strong version of Burzio’s generalization). In other words, we could propose that DAT-NOM and GEN-NOM alternations never happen in true passives, this being the reason why they take place only in Icelandic middles, stative passives, and unaccusatives and in Ancient Greek ‘passives’ (which, under Lavidas’s reasoning, would not be passives at all). We have not pursued this idea further because the comparison between Ancient Greek and Icelandic to be presented in this section shows that there are systematic differences in the Case systems of the two languages, correlating with the different environments in which DAT-NOM and GEN-NOM alternations take place. Analyzing Ancient Greek on a par with Icelandic with respect to DAT-NOM and GEN-NOM alternations would obscure this correlation.

DIFFERENCE (ii): According to Maling (2002a), dative objects in Icelandic can be themes undergoing a change of location.

- (42) a. þeir mokuðu skaflinum burt
they shoveled snow.drift.the.DAT away
b. þeir mokuðu skaflinn
they shoveled/dug.through snow.drift.ACC

Svenonius (2002) argues that dative vs. accusative distribution on theme objects in Icelandic is conditioned by aspect: whenever a verb denotes a pair of subevents that do not perfectly overlap, then the object surfaces with dative. Accusative surfaces on objects when the two events perfectly overlap. Jónsson (2010:5) argues instead that accusative on themes of motion highlights ‘the (forceful) contact with the object, whereas the dative highlights the movement of the object’. Regardless of what the correct generalization is for Icelandic, what is important is that DAT can be assigned to themes. By contrast, DAT is never assigned on themes or objects of causatives in Ancient Greek (see Lavidas 2007, 2010 for extensive discussion).

DIFFERENCE (iii): Sigurðsson (1989) points out that only DO theme datives alternate in ditransitives. The dative case of benefactive/goal IOs does not alternate (Jónsson 2010 provides a list of some verbs that can do this). This holds for the *-st* verbs, where dative IOs stay dative, even under *-st*.

- (43) a. Jón gaf mér þetta tækifæri.
John.NOM gave me.DAT this opportunity.ACC
‘John gave me this opportunity.’ (Sigurðsson 1989:270)
b. **Mér** gaf-st þetta tækifæri (*viljandi).
me.DAT gave-MID this opportunity.NOM (*willingly)
‘I happened to get this opportunity.’ (Sigurðsson 1989:270)

Compare 43 to 44, taken from Sigurðsson & Wood 2012. For ditransitive verbs that take two dative objects, only the DO dative becomes nominative; the IO remains dative.

- (44) a. Þeir úthlutuðu okkur velli til 12:00.
they.NOM allocated us.DAT field.DAT until 12:00
‘They allocated a field to us until 12:00.’
b. Okkur úthlutaðist völlum til 12:00.
us.DAT allocated.MID field.NOM until 12:00
‘We got allocated a field until 12:00.’

By contrast, as we have seen extensively in §3, it is the DAT of the IO argument that becomes NOM in Ancient Greek passives of ditransitives.

Following Wood (2012), who builds on McFadden 2004 and Maling 2001, we assume that there are three types of dative objects in Icelandic: (i) dative objects introduced by an applicative *v* in ditransitives and certain monotransitives, (ii) dative objects introduced by a silent preposition, and (iii) dative objects that are DPs introduced by the verbal root. Crucially, it is only the third type, DO datives, that alternate in Icelandic. Wood assumes a decomposition of verbs along the lines of Marantz 2001, Alexiadou et al. 2006, and others, according to which verbs are syntactically decomposed into a Voice, a *v*, and a Root component, as illustrated in 45.

- (45) [Voice [*v* [Root]]]

He proposes to tie DO datives to some feature or property of a special type of the little *v* head in 45, v_{DAT} , given that this head is responsible for event semantics, thus accounting for the aspectual properties of dative distribution discussed by Svenonius (2002, 2006; see above). Following Schäfer (2008) and Sigurðsson (2011), Wood (2012) analyzes *-st*

in Icelandic middles as an exponent of an expletive subject in Voice. This explains why there is never an implicit external argument in these constructions. He furthermore proposes that there is an impoverishment rule operative at PF in Icelandic that deletes the feature leading to dative case assignment at PF in the context of expletive Voice.⁴⁵

$$(46) v_{\text{DAT}} \rightarrow v / [_{\text{VoiceP}} -st \text{ Voice } _]$$

When dative case cannot be assigned to DOs due to the impoverishment rule in 46, then nominative is employed as the ‘elsewhere’ case assigned when nothing else is available to assign Case. Crucially, the rule in 46 will not have any effect on dative assigned by the applicative head in ditransitives (and some monotransitives) or on dative assigned by P. It limits the environments in which DAT-NOM alternations take place in Icelandic to middles/anticausatives.⁴⁶

5.2. ICELANDIC VS. ANCIENT GREEK AND THE ROLE OF NOMINATIVE. Icelandic and Ancient Greek Case alternations have two properties in common. The first concerns the fact that dative behaves similarly to genitive in both languages: both cases alternate in the relevant environments. The second similarity is that both languages show no ditransitive vs. monotransitive asymmetry, unlike, for example, Standard German and Dutch where datives alternate only in ditransitives (Alexiadou et al. 2014). For Icelandic, the dative alternation in monotransitives is completely regular and productive and applies to all transitive verbs taking a dative (and to a lesser degree a genitive) DO as long as they can form *-st* middles. Ditransitive examples with an alternating theme dative are more difficult to construct, but they are possible, as was shown in example 44. These similarities can be accounted for under the hypothesis that in both languages, alternating dative and genitive arguments enter Agree with a functional head.

However, the two languages differ in the kinds of alternating arguments, themes in Icelandic vs. nonthemes in Ancient Greek, and in the environments of alternations, middles in Icelandic vs. passives in Ancient Greek. Starting from the first difference, we saw that Agree in Icelandic takes place with dative and genitive DOs that have the categorical status of DPs and are selected by the verbal root. PPs headed by a null preposition and arguments introduced by applicative heads in monotransitives and ditransitives enter incomplete Agree (i.e. have quirky Case) and hence do not alternate, as was discussed in §4.2. By contrast, in Ancient Greek, complete Agree is generalized to all datives, except for the ones retaining their contentful zero prepositions (e.g. comitatives, ablatives).

⁴⁵ Schäfer (2008) offers an alternative analysis of the Icelandic alternation. In his system, the causative predicates that mark their objects with dative involve a $\text{Voice}_{\text{DAT}}$ head, which interrupts structural Case assignment and has the property of assigning inherent dative to the internal argument in its c-commanding domain. In anticausatives, where no such head is present, the theme argument will surface with nominative.

⁴⁶ One final observation is important to keep in mind, namely the fact that the proposed impoverishment rule is not specific to dative. Icelandic also has DO genitives (to a much lesser degree than datives). Just like datives, genitives alternate with nominative in *-st* middles but stay intact in passives (Thráinsson 2007:290).

(i) Ég óska nýrra starfsmanna.

I.NOM wish.for new employees.GEN

‘I seek new employees.’

(ii) Nýrra starfsmanna er óskað.

new employees.GEN are wished.for

‘New employees are sought.’

(iii) Nýir starfsmenn óskast.

new employees.NOM are.wished.for.MID

‘New employees are sought.’

Therefore, just like in Ancient Greek, genitives are similar to datives in their ability to alternate with nominatives, but of course the environment is consistent with what we have observed in Icelandic so far: genitives alternate in middles, not in passives.

In order to explain the different contexts where alternations take place, namely the middles vs. passives difference, we propose to appeal to different properties of the respective Voice systems (see Alexiadou et al. 2014). The key insight we build on comes from Svenonius (2002, 2006), Schäfer (2008), Sigurðsson (2011), and Wood (2012), who argue that the dative and genitive alternation in Icelandic is assigned by a HEAD LOWER THAN VOICE and therefore is not affected when passive Voice is present. Specifically, we adopt 45, the basic architecture of verbs argued for in Marantz 2001, Alexiadou et al. 2006, and others, according to which verbs decompose into Voice, *v*, and a Root. This decomposition makes available two heads that could in principle be involved in dative Case licensing, namely Voice and *v*. In Ancient Greek, active Voice enters Agree with datives and genitives, while passive Voice is deficient and Agree takes place between datives/genitives and T, in the way we described in §4. In Icelandic, by contrast, the lower head *v* licenses dative DOs, as we saw, and Voice [+passive] does not block assignment of dative. Following Wood (2012), we assume that the PF impoverishment rule (46) deletes the feature leading to dative and genitive Case assignment in the context of expletive *-st* Voice in Icelandic middles, anticausatives, and adjectival passives. Nominative is then employed as an elsewhere case for the objects that cannot be licensed otherwise.

This brings us to the final difference between Icelandic and Ancient Greek, namely the fact that the dative and genitive case realized on alternating DOs in Icelandic cannot be characterized as ‘dependent cases’ in the sense of the m-case rules in 33. Crucially, dative and genitive surface on DOs in Icelandic passives IN THE ABSENCE OF A HIGHER C-COMMANDING NOMINATIVE (see e.g. example 41c above and many examples in Svenonius 2002, 2006, Schäfer 2008, Sigurðsson 2011, Wood 2012, and others). This means that the dependent case rules 33b and 33d are inappropriate to handle Icelandic. We propose to link this difference between Ancient Greek and Icelandic to a parametrization in the properties of nominative case across languages. In a language like Ancient Greek, nominative is a mandatory case that must be assigned, taking priority over all other cases (Harley 1995, Alexiadou & Anagnostopoulou 2006). As a result, there is never a situation where an argument eligible to receive accusative or dative can do so in the absence of a higher nominative. By contrast, nominative assignment is not obligatory in Icelandic, and arguments can receive dative, genitive, or accusative in the absence of a higher nominative in their domain. Nominative is only assigned as an elsewhere case to arguments that cannot receive case otherwise, as in the DAT-NOM and GEN-NOM alternations in Icelandic middles.

We suspect that this is a broader parameter differentiating languages, one that explains, for example, why the Russian examples in 47 are ungrammatical (from Pesetsky & Torrego 2011), while their German counterpart in 48 is not.

(47) Russian

a. *Bylo pomoženo studentam. (*any word order, any Case pattern)
 was helped students.DAT

b. *Bylo upravleno zavodom. (*any word order, any Case pattern)
 was managed factory.INSTR

(48) German

Mir wurde geholfen.
 me.DAT was.3SG helped
 ‘I was helped.’

As argued for in Zaenen et al. 1985 and many others, German datives in constructions like 48 are not quirky subjects; they bear inherent dative of the kind found in the Russian example in 47a. The difference in status between the ill-formed Russian examples

(47a,b) and their well-formed German counterpart (48) can be explained by appealing to the properties of nominative case in the two languages. Nominative is mandatory in Russian, as in Ancient Greek, and 47a,b are ungrammatical because dative and instrumental are inherent Cases and nominative cannot be realized. In German, similarly to Icelandic, by contrast, nominative is not obligatory and therefore 48 is well formed.

6. SUMMARY. In this article, we investigated DAT-NOM and GEN-NOM alternations in Ancient Greek passives. The specific questions we posed concerned (i) the nature of dative and genitive Case, that is, whether they are inherent or structural, and (ii) the conditions determining the environments of alternations (monotransitives, ditransitives, passives, and middles). Based on synchronic, diachronic, and comparative evidence, we argued that the correct approach to dative/genitive Case is a MIXED approach, according to which dative and genitive can be inherent/lexical, structural, or quirky Cases, both across languages and within one and the same language. We proposed an analysis for Ancient Greek Case alternations that combines the following proposals: (i) the core property determining Case alternations is Case (un)interpretability; (ii) arguments with uninterpretable Case enter Agree; and (iii) a generalized dependent case assignment algorithm at PF treats dative and genitive arguments entering complete Agree on a par with accusative arguments. We then compared Ancient Greek to Icelandic, and we argued that the differences between the two languages stem from variation in (i) the kinds of arguments undergoing complete Agree (PPs/DPs vs. DPs), (ii) the heads entering Agree with dative arguments (Voice vs. *v*), and (iii) the nature of nominative case (mandatory or not).

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Anagnostopoulou
University of Crete
Department of Philology
74 100 – Rethymno, Greece
[elena@phl.uoc.gr]

[Received 10 May 2011;
revision invited 13 December 2012;
revision received 31 December 2012;
revision invited 30 September 2013;
revision received 1 July 2014;
accepted 12 November 2014]

Sevdali
Ulster University
School of Communication
Shore Road, Newtownabbey
Co. Antrim BT37 0QB, United Kingdom
[c.sevdali@ulster.ac.uk]