INDIRECT PASSIVES IN ENGLISH AND GREEK*

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ABSTRACT The indirect passive construction (e.g. *I was given a book*) is ungrammatical in many languages; however, it is found in both English and Ancient Greek. Much previous work on indirect passives seeks to explain their origin in terms of language-specific developments, and thus has difficulty accounting for the substantial parallels between indirect passives in languages as different typologically as English and Ancient Greek. Using corpus data, we show that in both English and Ancient Greek the acceptability of indirect passives varies widely across different lexemes, a variation that can be predicted only in part by the thematic roles of the arguments in question. The data also show that in both languages, indirect passives occur earliest and most productively in verbs with multiple, potentially ambiguous argument structures; we propose that indirect passives in English and Ancient Greek may have originated in the reanalysis of what were originally direct (i.e. theme-subject) passives. Despite these similarities, indirect passives in English and Greek ultimately followed different diachronic paths, becoming increasingly productive in English but being lost in Greek; some of the factors potentially responsible for this divergence are also examined.

1 INTRODUCTION

There is a well-known type of construction in which the non-theme argument of a ditransitive verb, such as a recipient or beneficiary, becomes the subject of a passive construction, as in (1).

(1) (a) They gave me a book
     (b) I was given a book

Some variation exists in the terminology used for constructions such as (1 b). In this work, they will be described as *indirect passives* (abbreviated as IP), although other works cited here may make use of alternative terms such as "recipient passives" (e.g. Allen 1995; Stein, Ingham & Trips 2019); conversely, the term *direct passive* (abbreviated as DP) is used here to denote a passive in which a theme or patient becomes the subject.

Indirect passives are ungrammatical in many languages.[1] Within the Indo-European family they are found in Ancient Greek and English, whose resemblance in this respect was already noted by Feldman (1978); similar constructions have also been observed in North Germanic languages (e.g. Haddican & Holmberg 2019; Falk 2022). Outside Indo-European, their existence is well documented in Japanese (e.g. Ishizuka 2012) and a number of Bantu languages (e.g. Alsina 1996). Languages without such constructions possess various means of promoting recipients to subject position, such as the *bekommen* constructions in German (e.g. Alexiadou, Anagnostopoulou & Sevdali 2014) and *vedersi* constructions in Italian (Giacalone Ramat 2020); however, unlike the constructions that we describe here, these are clearly distinct in form from the usual direct passive constructions in their respective languages, in (a) having separate auxiliaries and also in (b) being restricted to ditransitives of a certain type.

There are also languages, such as Icelandic, in which recipients can be promoted to subject position while still retaining oblique case, as 'quirky' subjects (e.g. Zaenen, Maling & Thráinsson 1985). Such languages resemble Ancient Greek in having passive constructions in which recipients can become syntactic subjects. However, these constructions are unlike their Greek counterparts

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1 Languages in which indirect passives are ungrammatical include Latin (e.g. Gildersleeve & Lodge 1948: 152), French (e.g. Batchelor & Chebli-Saadi 2011: 328–329), Portuguese (e.g. Willis 1971: 362), Castilian and Mexican Spanish (e.g. Butt & Benjamin 1999; cf. Montalbetti 1999), Standard Dutch (Bayer, Bader & Meng 2001: 495–496), German (e.g. Stopp 1960: 272; cf. Bayer et al. 2001), Serbo-Croatian (Mihailović 1974), and Modern Greek (Anagnostopoulou 2003). While we know of no large-scale typological study addressing the global distribution of these constructions, there is enough evidence regarding their rarity among European languages that we feel the parallel between English and Ancient Greek to be salient.

in that their subjects are not fully parallel to the subjects of active sentences; in Icelandic, all cases are found in subjects of active sentences, but nominative subjects of indirect passives never occur.[2] Nor can this difference be explained solely with reference to the lexically assigned nature of Icelandic case; Ancient Greek also had lexical case, most clearly apparent in the genitive and dative objects of certain monotransitive verbs, but in passives even these lexical genitives and datives can receive nominative marking (Conti Jiménez 1998). It has therefore been proposed that passives in Ancient Greek and Icelandic differ substantially in their underlying syntax (Anagnostopoulou & Sevdali 2015), in that the absorption of datives and genitives happens in Voice in the former but in v in the latter. In this work we confine our discussion of indirect passives to constructions in which the non-theme argument receives canonical subject marking, such as nominative case, in order to minimise the risk of conflating potentially separate phenomena, namely the existence of 'quirky' subjects and the existence of dative–nominative alternations.

There are two ways in which a comparison of indirect passives in English and Ancient Greek may prove fruitful. Through a comparison of early examples of the indirect passives in both languages, it is possible to gain a clearer understanding of the origin and spread of these constructions. Through an examination of their subsequent diachronic development, it may also be possible to understand how the paths of these constructions in English and Greek came to diverge; in English their productivity has continued to expand, while in Modern Greek they have been lost altogether. Although the primary focus of this article is upon the former point, we will also provide some preliminary discussion of the subsequent history of indirect passives. Our starting point will be an investigation of the indirect passive in Ancient Greek, followed by an investigation of the indirect passive in English. This will be followed by our proposals regarding the factors involved in the rise of indirect passives, centring around ambiguities in the argument structure of the relevant verbs. We will then examine some of the synchronic and diachronic differences between the English and Greek data, and discuss what these findings have revealed about the nature of the indirect passive.

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2 In Icelandic, dative–nominative alternations occur in the constructions known as *-st middles*, in which the alternating datives have been argued to be themes (Svenonius 2006). When dative recipients do become subjects of middles, they retain their dative ('quirky') case; the resulting constructions often also exhibit semantic differentiation from the corresponding actives (Schätzle 2018).

2 The indirect passive in Ancient Greek

2.1 Greek verb classes

Greek ditransitive verbs occur with several different case frames; the non-theme argument may be accusative, genitive or dative. In Anagnostopoulou, Macleod, Mertyris & Sevdali (2024), a classification system is proposed on the basis of semantic and syntactic criteria, including the presence or absence of indirect passives. It was found that arguments with certain thematic roles are never found as the subjects of passives; this can be seen in Table 1, which shows a selection of the thematic roles found for dative arguments.

Class	Examples	Dative Role	IP
A: Goal verbs	*dídōmi* 'give' *opheílō* 'owe' *deíknumi* 'show' *pémpō* 'send'	Goal	✗
B: 'Advise'/'Command'	*parainéō* 'advise' *parangéllō* 'command' *epitássō* 'enjoin'	Affected Addressee	✓
C: 'Entrust'	*enkheirízō* 'entrust' *parakhōréō* 'cede'	Recipient	✓
D: Comparison/Mixing	*apeikázō* 'compare' *meígnumi* 'mix'	Instrument	✗

Table 1 Classes of Ancient Greek acc–dat verbs

However, it will be seen below that although an appropriate thematic role is a necessary condition for the formation of indirect passives, considerable lexical variation exists within each of the classes for which indirect passives are possible.[3] The following discussion will focus primarily on the accusative–dative and accusative–accusative case frames; while genitive arguments show

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3 A reviewer raises the question of whether the differences in passivization behaviour can be encapsulated by a model in which "core" objects, regardless of case, can passivize but non-core objects, including some accusatives, fail to do so. In Greek, genitives and datives can serve as the sole, and therefore core, arguments of monotransitives, and some of these can indeed passivize (e.g. Conti Jiménez 1998). However, among verbs with accusative themes and dative recipients, there is no evidence that some datives differ in their syntactic status from others. While there are languages in which differences of this sort can be detected using diagnostics such as word order and constituency, Greek has a number of syntactic properties, including free word order/hyperbaton, object drop, and bare adjuncts, which make it extremely difficult to find diagnostics that do not presuppose a particular analysis and thus fall into circularity.

similar behaviour in passives, they present additional methodological complications, such as the issue of distinguishing between argument genitives (e.g. malefactives) and non-argument genitives (e.g. external possessors), and also involve semantic roles with fewer parallels among English indirect passives (for further discussion see Anagnostopoulou et al. 2024).

2.2 Indirect passives in Ancient Greek ACC–DAT verbs

The considerable lexical variation existing in the occurrence of indirect passives from semantically comparable verbs can be seen from an examination of selected verbs in Classes B and C. Selected verbs from these classes were chosen on the basis of whether they displayed some relevant passivization behaviour, whether or not indirect passives occur in the corpus used here, and with the aim of facilitating comparison with English (see Section 3). The data in Tables 2, 3, and 4 were obtained by searching the Thesaurus Linguae Graecae (TLG) (Pantelia 2021) for the relevant lemmata. The TLG's morphological filters were used to categorize the results as active or passive; indirect passives were then identified through manual examination of the results. If a given construction was morphosyntactically ambiguous between a direct and an indirect passive, it was given the more conservative classification as a direct passive. The figures below may include a certain amount of duplication; for example, no attempt has been made to exclude passages from earlier texts that are also quoted in later works. Moreover, automated searching is complicated by the existence of morphological syncretism in Greek. There are tenses in which no morphological distinction is made between passives and middles; for these tenses, the direct passive figures may include some middles. Other forms are ambiguous between active and middle and/or passive;[4] these are counted as active, but if they are potentially passive they also appear in the direct passive count. However, as these issues affect all verbs similarly, they should not impair the significance of the lexical variation shown by the data. Token counts for active forms are included primarily as an indicator of relative frequencies among verbs. The ratio of active verbs to passive verbs has little meaning in isolation, as the choice between active and passive depends not only on syntax and the lexical semantics of the verb, but on a broad range of factors including the pragmatic context and information structure of each sentence (cf. Bresnan, Cueni, Nikitina & Baayen 2007 on the factors influencing dative alternation in English). For similar reasons, morphologically unambiguous middles, which are relatively infrequent, have been excluded

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4 Such as *epibaleî* (3SG.FUT.ACT or 2SG.FUT.MID) and *mēnúei* (3SG.PRS.ACT, 2SG.PRS.MID, or 2SG.PRS.PASS)

as irrelevant to the present discussion.

Verb	Class	Gloss	DP	IP	Active	Total
diatássō	B	appoint	0 (0.0%)	0 (0.0%)	2 (100.0%)	2
epibállō	B	lay on	3 (25.0%)	0 (0.0%)	9 (75.0%)	12
epitássō	B	enjoin	1 (16.7%)	0 (0.0%)	5 (88.3%)	6
marturéō	B	testify	4 (44.4%)	0 (0.0%)	5 (55.6%)	9
mēnúō	B	inform	1 (10.0%)	0 (0.0%)	9 (90.0%)	10
parainéō	B	advise	1 (1.4%)	0 (0.0%)	69 (98.6%)	70
promēnúō	B	foretell	0 (0.0%)	0 (0.0%)	2 (100.0%)	2
prostássō	B	post	3 (17.6%)	0 (0.0%)	14 (82.4%)	17
sumbouleúō	B	counsel	3 (13.6%)	0 (0.0%)	19 (86.4%)	22
enkheirízō	C	entrust	1 (14.3%)	0 (0.0%)	6 (85.7%)	7
klērodotéō	C	bequeath	—	—	—	—

Table 2 Variation in ACC–DAT verbs: Archaic Greek (<500 BC)

Verb	Class	Gloss	DP	IP	Active	Total
diatássō	B	appoint	50 (50.5%)	0 (0.0%)	49 (49.5%)	99
epibállō	B	lay on	122 (36.5%)	0 (0.0%)	212 (63.5%)	334
epitássō	B	enjoin	80 (32.7%)	1 (0.4%)	164 (66.9%)	245
marturéō	B	testify	298 (27.7%)	0 (0.0%)	777 (72.3%)	1075
mēnúō	B	inform	78 (28.5%)	1 (0.4%)	195 (71.2%)	274
parainéō	B	advise	24 (8.1%)	0 (0.0%)	274 (91.9%)	298
promēnúō	B	foretell	0 (0.0%)	0 (0.0%)	2 (100.0%)	2
prostássō	B	post	288 (39.6%)	0 (0.0%)	439 (60.4%)	727
sumbouleúō	B	counsel	68 (9.7%)	0 (0.0%)	630 (90.3%)	698
enkheirízō	C	entrust	7 (11.9%)	0 (0.0%)	52 (88.1%)	59
klērodotéō	C	bequeath	—	—	—	—

Table 3 Variation in ACC–DAT verbs: Classical Greek (500–300 BC)

Tables 2, 3, and 4 show the diachronic development of indirect passives and their lexical variation. In Archaic Greek, ACC–DAT verbs do not yet form indirect passives; while the lexemes discussed here furnish a relatively low number of total tokens, these findings are corroborated by existing evidence that Archaic Greek differs significantly from Classical Greek in forming few or no passives of dative arguments of monotransitives (Conti Jiménez 1998), whose passivization is generally parallel to that of ditransitives. In the Classical Period, indirect passives of ACC–DAT verbs begin to be attested; although

Verb	Class	Gloss	DP	IP	Active	Total
diatássō	B	appoint	1586 (65.5%)	0 (0.0%)[a]	834 (34.5%)	2420
epibállō	B	lay on	1426 (26.2%)	0 (0.0%)[a]	4026 (73.8%)	5452
epitássō	B	enjoin	1307 (36.7%)	58 (1.6%)	2200 (61.7%)	3565
marturéō	B	testify	3807 (36.3%)	228 (2.2%)	6452 (61.5%)	10487
mēnúō	B	inform	1085 (29.2%)	1 (0.0%)	2630 (70.8%)	3716
parainéō	B	advise	891 (20.4%)	1 (0.0%)	3465 (79.5%)	4357
promēnúō	B	foretell	135 (22.1%)	2 (0.3%)	474 (77.6%)	611
prostássō	B	post	2964 (32.6%)	53 (0.6%)	6068 (66.8%)	9085
sumbouleúō	B	counsel	630 (18.0%)	15 (0.4%)	2857 (81.6%)	3502
enkheirízō	C	entrust	400 (23.6%)	409 (24.1%)	888 (52.3%)	1697
klērodotéō	C	bequeath	22 (36.7%)	3 (5.0%)	35 (58.3%)	60

a The indirect passives of *diatássō* and *epibállō* are recorded in papyri (e.g. UPZ 1 110 179; P.Oxy. 45 3261.5).

Table 4   Variation in ACC–DAT verbs: Post-Classical Greek (300 BC–AD 500)

these constructions are generally rare, it is noteworthy that no indirect passives are recorded for any of the five most frequent verbs (i.e. *marturéō*, *prostássō*, *sumbouleúō*, *epibállō*, and *parainéō*). Despite their rarity, though, early examples of indirect passives such as (2) seem indistinguishable grammatically from later examples such as (18) below.

(2)   ἄλλο τι μεῖζον εὐθὺς ἐπιταχθήσεσθε

állo	***ti***	***meîzon***	*euthùs*
other.ACC.SG	some.ACC.SG	greater.ACC.SG	straight

epitakhthḗsesthe
enjoin.2PL.FUT.PASS

'You will be enjoined something else greater straight away' [Thuc. 1.140.5]

In the Hellenistic period indirect passives begin to undergo a considerable expansion. The greater quantity of data makes the lexical variation in their distribution much more apparent, yet despite this lexical restriction, indirect passives were still productive enough to be extended to innovative verbs such as *klērodotéō* 'bequeath'. It is at this period that the observed lexical variation

first becomes statistically significant ($\chi^2(10) = 5453.564, p < 0.001$), even when the outlier *enkheirízō* is excluded ($\chi^2(9) = 413.021, p < 0.001$);[5] although, as described above, caution is needed in applying statistical tests to so context-sensitive a phenomenon as passivization, such tests can at least exclude purely random variation. It seems more probable that lexical variation characterized indirect passives in Ancient Greek from their beginning than that these constructions progressed from a stage in which they were infrequent but unrestricted to a stage in which they were much more frequent but also more restricted; certainly, no examples have been identified of verbs that formed indirect passives only in earlier periods.

Lexical variation exists even among verbs that belong to the same class, which might otherwise be expected to be semantically and syntactically comparable.[6] There are many verbs for which the indirect passive is relatively infrequent, but which nevertheless provide a few examples attesting to the existence of this construction, as in (3).[7]

(3) ὁ δὲ μέγας Παῦλος, προμηνυθεὶς ὑπὸ τοῦ θεοῦ τὴν ἐπιδρομὴν τῶν δαιμόνων, παρευθὺ πλησίον αὐτῆς ἱστήκει

ho		*dè*	*mégas*	*Paûlos*	
the.NOM.SG		PRT	great.NOM.SG	Paul.NOM	
promēnutheìs			*hupò*	*toû*	*theoû*
foretell.PTCP.AOR.PASS.NOM.SG			by	the.GEN.SG	god.GEN.SG
tḕn	***epidromḕn***		*tôn*	*daimónōn*	*pareuthù*
the.ACC.SG	incursion.ACC.SG		the.GEN.PL	demon.GEN.PL	straight
plēsíon	*autês*	*histḗkei*			
near	her.GEN	stand.3SG.PLPF			

'The great Paul, forewarned by God of the incursion of the demons, stood right by her' [Act. Xanth. 13.24]

As noted above, indirect passives of some verbs are found only in non-literary texts such as papyri; this suggests that indirect passives may have differed

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5 For Classical Greek, $\chi^2(9) = 12.739, p = 0.080$ (Fisher-Freeman-Halton)

6 The lexical variation observed for ACC–DAT verbs is also found in ACC–GEN verbs (see Anagnostopoulou et al. 2024)

7 Indirect passives in Ancient Greek are found not only with finite verbs but with non-finite forms such as infinitives and participles, which were inflected for the same range of voice categories. In an example such as (3), the use of a participial indirect passive may have been used to avoid any possible shift of emphasis away from the topical subject of the main verb. In other words, the use of an indirect passive allows the participle to have the same subject as the main verb, following a general preference for coreferential participles over absolute participles.

from direct passives in sociolinguistic properties such as register, which may
have contributed to their scarcity in the textual record. However, no such
patterns are clearly identifiable in the environments in which they do occur
in literary texts; further work may be needed to determine the extent to which
any sociolinguistic associations of indirect passives are recoverable.

2.3 Indirect passives in Ancient Greek ACC–ACC verbs

As mentioned above, Greek also has ditransitive verbs taking two arguments
in the accusative case. From Table 5 it can be seen that such verbs can be
divided into two classes: those in which the animate argument is a goal (e.g.
didáskō 'teach') and those in which it is a source (e.g. *aitéō* 'request'). It is
sometimes stated (e.g. Smyth 1920) that only the animate argument of these
verbs can become the subject of a passive construction; while it will be seen
below that passivization of inanimate arguments is relatively infrequent, we
have found passivization of both arguments for many of these verbs, such as
erōtáō 'ask'. Example (4) shows passivization of an animate argument; the
nominative case of the passive participle *erōtētheís* 'asked' shows agreement
with the animate (pro-dropped) subject of *apokrínetai* 'answers'. In contrast,
(5) shows passivization of the inanimate argument; the subject of the passive
verb *erōtésthō* is a nominalized participle, *erōtēména* 'things asked, questions',
referring to inanimate entities.

(4)   τινὸς γὰρ ἐπιστήμην ἀποκρίνεται οὐ τοῦτ' ἐρωτηθείς

    tinòs   *gàr epistḗmēn*   *apokrínetai*   *ou*
    something.GEN.SG for knowledge.ACC.SG answer.3SG.MP not
    toût'   ***erōtētheís***
    this.ACC.SG   ask.PTCP.AOR.PASS.NOM.SG
    'For one answers about knowledge of something, not having been
    asked this' [Pl. Tht. 147b]

(5)   μοι τὰ ἔμπροσθεν ἠρωτημένα πατέρα τε καὶ νομοθέτην
     ἠρωτήσθω

    moi   *tà*   *émprosthen erōtēména*   ***patéra***
    me.DAT the.NOM.PL before   ask.PTCP.PF.NOM.PL father.ACC.SG
    te   *kaì*   ***nomothétēn***   ***erōtésthō***
    and and lawgiver.ACC.SG ask.PF.IMP.3SG.MP
    'Let the things previously asked by me be asked of a forefather and
    lawgiver' [Pl. Leg. 2.662e]

Such passives of accusative arguments are relatively common cross-linguistically; for example, they can be found in languages, such as Latin, in which dative arguments never become nominative subjects. However, as Table 5 shows, there is also considerable lexical variation among acc–acc verbs in the incidence of indirect passives.

Verb	Class	Gloss	DP	IP	Middle	Active	Total
didáskō	Goal	teach	1 (0.1%)	85 (9.1%)	11 (1.2%)	833 (89.6%)	930
eperōtáō	Goal	question	0 (0.0%)	3 (2.8%)	0 (0.0%)	105 (97.2%)	108
erōtáō	Goal	ask	58 (6.4%)	123 (13.6%)	0 (0.0%)	721 (79.9%)	902
keleúō	Goal	order	22 (1.2%)	19 (1.1%)	3 (0.2%)	1767 (97.5%)	1812
aitéō	Source	request	4 (0.9%)	3 (0.7%)	144 (34.0%)	272 (64.3%)	423
apaitéō	Source	demand back	1 (0.7%)	0 (0.0%)	5 (3.6%)	132 (95.7%)	138

Table 5   Variation among acc–acc verbs in Archaic/Classical Greek

Table 5 focuses on the use of acc–acc verbs in the Archaic and Classical periods. One salient difference between acc–acc verbs and acc–dat verbs is that indirect passives of the former are already recorded in the earliest texts. This means that Archaic Greek and Classical Greek may be treated as a single stage, rather than as separate diachronic stages. Because indirect passives of these verbs were more numerous in early texts, it was possible to obtain meaningful data while focusing on a narrower time range and to employ a methodology involving greater manual review. Morphologically ambiguous middles were identified on semantic grounds, a process which was not feasible for acc–dat verbs, owing to the much larger quantity of data involved; however, larger samples are less likely to be significantly affected by the 'noise' from the small number of irrelevant forms included in the absence of such manual review. Moreover, it was feasible to include a greater number of non-literary sources, not only from the TLG texts but from papyri (Duke University 2019) and inscriptions (Packard Humanities Institute 2019).[8]

Even in Archaic and Classical Greek, acc–acc verbs exhibited clear lexical variation. This variation is statistically significant ($\chi^2(5) = 239.864, p < 0.001$). No clear differences have been observed in the predictability of the lexical variation shown by acc–acc verbs and acc–dat verbs, which is especially surprising given their different diachronic trajectories. As a reviewer notes, direct passives of acc–acc verbs are in general less frequent than those of acc–dat verbs; this may be due in part to the low affectedness, and there-

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8 We have compiled most of the relevant data as part of the DiGreC corpus (Macleod, Anagnostopoulou, Mertyris & Sevdali 2021).

fore salience, of inanimate arguments such as questions, and conversely to the greater frequency of highly affected animate patients with ACC–DAT verbs (see Section 4). The existence of significant lexical variation in both ACC–ACC verbs and ACC–DAT verbs suggests that lexical variation may be inherent in indirect passives as a construction, rather than being an artefact of the morphological case properties of the indirect object.

2.4 *The distribution of indirect passives in Ancient Greek*

From the data presented above, it can be seen that a number of factors are involved in the distribution of indirect passives in Greek. Arguments with certain theta roles, such as comitatives and instruments (e.g Class D in Table 1), never passivize; instead, passivization is restricted to arguments with appropriate roles, such as affected addressees and recipients. However, not all verbs whose arguments have these roles form indirect passives. It may also be seen from Tables 2, 3, and 4 that many of the ACC–DAT verbs forming indirect passives are prefixed compound verbs, a phenomenon that has been previously observed (e.g. Michelioudakis 2012; Anagnostopoulou & Sevdali 2020); however, some verbs forming indirect passives have no prefix (e.g. *mēnúō* 'inform', *marturéō* 'testify'), while many prefixed verbs have no indirect passives attested (e.g. *entássō* 'insert', *epimarturéō* 'confirm'). The correlation between indirect passives and prefixed verbs, and its syntactic implications, will be discussed further in Section 5. Nevertheless, much of the lexical variation in the occurrence of indirect passives appears to be purely idiosyncratic, and not predictable on the basis of morphosyntactic or semantic criteria.

3 THE INDIRECT PASSIVE IN ENGLISH

3.1 *Previous approaches to the indirect passive*

The indirect passive in English has perhaps received more attention in the literature than its Greek counterpart. Generative accounts have often focused on the synchronic syntax of Modern English, exploring questions of locality and of how an indirect object is allowed to move to the subject position. A phenomenon relevant to much of this work is the 'dative alternation' seen in pairs such as (6 a) and (6 b):[9]

(6) (a) They gave me a book
     (b) They gave a book to me

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9 Modern Greek, which has lost the indirect passive, has nevertheless acquired an English-style dative alternation (Anagnostopoulou 2003).

For example, one influential analysis, proposed by Larson (1988), suggests that (6 a) is derived from (6 b) by a process of 'dative shift', while an alternative analysis (e.g. Harley 1995; Harley & Jung 2015) interprets them as differing in their underlying syntax, respectively involving P_{HAVE} and P_{LOC} heads. A fundamental assumption underlying both approaches is that each structure forms only a single type of passive, a view which would appear to receive support from asymmetries such as those in (7); accordingly, (7 a) could simply be seen as a "direct passive" corresponding to (6 a), as (7 b) to (6 b).

(7) (a) I was given a book

(b) A book was given to me

(c)% A book was given me

However, constructions such as (7 c) are fully acceptable in many varieties of British English, varieties which in most other respects resemble those lacking (7 c).[10] This phenomenon was investigated by Haddican (2010), who focused especially on theme–goal constructions. In a number of experiments on Manchester English, he sought to uncover the restrictions on theme–goal constructions both in the active (e.g. *she sent them me*) and the passive (as in 7 c), examining factors such as verb classes, DP/pronoun restrictions, etc. He argued that theme–goals are true ditransitives, or in his terminology DOCs (double-object constructions) and that theme passives derive directly from these active counterparts (*she gave it/the ball the boy → it/the ball was given the boy*), showing that attested grammars fall into at least four categories based on whether speakers accept theme–goal ditransitives and theme passives, and proposed an analysis to account for all of them. Varieties of English with Haddican's 'Grammar 2', which allows for theme–goal ditransitives with both pronouns and DPs, as well as theme passivisation, possess passive symmetry of the sort that has been shown to exist in Ancient Greek (e.g. Anagnostopoulou & Sevdali 2015: 458). He accounts for them by proposing that *v* has an EPP feature that can attract both the theme and the goal; theme passivisation may thus be understood as a case of the theme's being the closest argument with a D feature closer to T. Such an analysis preserves the classic intuition that both direct (theme) and indirect (goal) passives are derived

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10 As a reviewer observes, there are some speakers for whom constructions of this sort are less acceptable with non-pronominal objects (e.g. *%a book was given John*). Haddican (2010) reports that this phenomenon is subject to considerable dialectal variation; we follow his analysis in attributing such dialectal differences to syntax–prosody constraints rather than to more fundamental structural differences.

from two separate actives, i.e. where the relevant object is closest to the subject position. However, it differs crucially from analyses in which the argument passivized in constructions such as (7 a) is simply a direct object; moreover, an important point of Haddican's analysis is that varieties in which (7 c) is ungrammatical differ only in the EPP behaviour of v and not in the general syntactic structure of ditransitives. Analyses of the English indirect passive which interpret sentences such as (7 c) as fundamentally incompatible with ditransitive syntax are therefore limited in their explanatory power not merely to a single language but to specific varieties of a single language.

Attention has also been given in the literature to the diachronic development of indirect passives in English. Unambiguous examples of indirect passives are first recorded in the 14th century (Allen 1995). A number of different explanations for their origin have been proposed; for example, Jespersen (1927) suggests that preverbal datives were reanalysed as nominatives, while Allen (1995, 2001) suggests that postverbal datives were reanalysed as accusatives, and Stein et al. (2019) propose that the factor responsible was the replacement of lexical case by structural case. However, despite the differences among these proposals, there are two respects in which they are equally problematic.

One trait common to the different analyses is that they would seem to predict a parametric-type change, which would be expected to affect all verbs in the lexicon of a given speaker. However, unlike other changes that have been explained as parameter shifts, indirect passives appear to have diffused very slowly through the English lexicon, with acceptability varying widely for different verbs. Allen (1995) observes that the verbs in most early examples of indirect passives are French loanwords, while Stein et al. (2019) trace the gradual extension of indirect passives from these verbs onward, finding that by the end of the 17th century there are still no more than 49 lexemes that can be shown to have formed indirect passives. Even as recently as 1927, examples such as *He was written a letter* are marked as questionable by Jespersen (for discussion see Denison 1993: 114). Such a gradual diffusion, extending from the 14th to the 20th century, contrasts sharply with classic examples of parametric syntactic change such as the rise of *do*-support in English (e.g. Ellegård 1953). This was a complex change, in which *do*-support was extended from questions to negative statements and thence to negative imperatives, but it nevertheless reached completion within three centuries. While the distribution of forms exhibited some lexical variation, this showed clear ties to factors such as frequency, with the most frequent verbs showing the most conservative behaviour. Moreover, while earlier analyses of this change interpreted its evolution in terms of extended competition between two gram-

mars, a conservative grammar and a fully modern grammar, spreading from one syntactic environment to another (e.g. Kroch 1989), more recent analyses (e.g. Han & Kroch 2000; Biberauer & Roberts 2010) view the gradual expansion of *do*-support from one syntactic context to another as reflecting the successive emergence of multiple grammars, each a coherent system in its own right. None of the syntactic models previously proposed for the rise of indirect passives can explain how such an intermediate stage might exist for these constructions; instead, the analysis of English indirect passives as essentially a type of direct passive would seem to predict similar distributions of direct and indirect passives for all speakers who had acquired the latter.

Another issue is that most of the factors invoked to explain the rise of indirect passives in English are highly language-specific, involving changes in the case system peculiar to English. As has been seen, indirect passives in English and Ancient Greek share a number of distinctive traits, including this lexical variability; however, the case system of Ancient Greek has none of the properties said to be essential preconditions for indirect passives in English, such as the loss of morphological case distinctions or the loss of lexical case. Throughout the relevant period, case marking in Greek has little morphological ambiguity, with the distinction between accusative and dative being especially clear; yet as (8) shows, such unambiguous datives can still alternate with nominatives in the passive.

(8) (a) παρήγγελλε τοῖς παρωξυμμένοις ταῦτα τὰ ἔργα

> *parḗngelle*   **toîs**   **parōxumménois**
> prescribe.3SG.AOR   the.DAT.PL   stimulate.PTCP.PF.DAT.PL
>
> *taûta*   *tà*   *érga*
> this.ACC.PL   the.ACC.PL   work.ACC.PL
>
> 'He prescribed these works to the stimulated'

(b) τὰ ἔργα ἃ παρηγγέλθησαν παρωξυμμένοι

> *tà*   *érga*   *hà*   *parēngélthēsan*
> the.ACC.PL   work.ACC.PL   REL.ACC.PL   prescribe.3PL.AOR.PASS
>
> **parōxumménoi**
> stimulate.PTCP.PF.NOM.PL
>
> 'the works which, having been stimulated, they were prescribed' [Them. Or. 11 144c.4]

Moreover, Ancient Greek has clear examples of lexical case assignment, such as theta-related case in monotransitives.

(9) οἱ Αἰγινῆται ἐβοήθεον τοῖσι Βοιωτοῖσι

hoi   *Aiginêtai*   *eboḗtheon*   ***toîsi***
the.NOM.PL   Aeginetan.NOM.PL   assist.3PL.IMPF   the.DAT.PL
Boiōtoîsi
Boeotian.DAT.PL
'The Aeginetans assisted the Boeotians' [Hdt. 5.89.1]

Clearly, any analysis of the English passive in terms of factors such as those normally proposed would be inapplicable to the Greek indirect passive, for which alternative explanations would need to be sought. However, if the development of indirect passives in English and Greek could be explained in similar terms, such an approach would have greater advantages in terms of parsimony than an approach in which the similarities between English and Greek were purely superficial.

3.2 English verb classes

The classification of verbs in English requires a different approach to that used for Greek, owing to the smaller number of morphological cases and the correspondingly greater use of prepositions for many thematic roles. For example, in English verbs with meanings such as 'mix' and 'compare' never appear with the ditransitive syntax used for verbs with meanings such as 'give' and 'send'. However, a system such as that proposed by Levin (1993), which classifies verbs on the basis both of syntactic and of semantic properties, can provide a starting point for the investigation of how such categories interact with the indirect passive; this system was also used to inform the classification of Greek verbs proposed in Anagnostopoulou et al. (2024). On the basis of this classification,[11] it will be shown below that as in Greek, the availability of indirect passives cuts across syntactic and semantic classes.

3.3 Indirect passives in English

For data on the development of the indirect passive in English, the *Parsed Corpus of Early English Correspondence* (Nevalainen, Raumolin-Brunberg, Keränen, Nevala, Nurmi, Palander-Collin, Taylor, Pintzuk & Warner 2006) was used. The *PCEEC*, also used by Stein et al. (2019), is a fully annotated corpus of manageable size; it covers the period from the early 15th to late 17th

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11 The classification of polysemous verbs has been based on the sense most relevant for indirect passives.

centuries, which their work has identified as a time of significant growth in the productivity of indirect passives, and provides a substantial body of texts drawn from a single genre. Searching was performed using the CorpusSearch tool (Randall 2010) for all occurrences of relevant verbs; the selection of lexemes was made with the aim of including verbs shown by previous work to be relevant, together with other syntactically and semantically similar verbs, as well as with the aim of providing the best possible comparanda for the Greek data. The OED and MED were used to identify variant forms of the lemmata in question, and searches were carried out for all matching forms tagged as verbs. The results were then manually classified as active, direct passive, or indirect passive, with prepositional 'pseudo-passives' (abbreviated as PP) being treated as a separate category (see further Section 5).

Class	Verb	Active	DP	IP	PP	Total
10.1 (*remove*)	*dismiss*	15 (55.6%)	12 (44.4%)	0 (0.0%)	0 (0.0%)	27
10.2 (*banish*)	*banish*	7 (38.9%)	11 (61.1%)	0 (0.0%)	0 (0.0%)	18
10.6 (*cheat*)	*debar*	5 (83.3%)	0 (0.0%)	1 (16.7%)	0 (0.0%)	6
	hinder	135 (85.4%)	22 (13.9%)	1 (0.6%)	0 (0.0%)	158
11.1 (*send*)	*deliver*	339 (52.7%)	302 (47.0%)	2 (0.3%)	0 (0.0%)	643
	send	4342 (91.0%)	369 (7.7%)	0 (0.0%)	58 (1.2%)	4769
13.1 (*give*)	*give*	2730 (91.0%)	259 (8.6%)	12 (0.4%)	0 (0.0%)	3001
	pay	680 (74.2%)	155 (16.9%)	77 (8.4%)	5 (0.5%)	917
13.3 (future	*allow*	132 (66.3%)	52 (26.1%)	13 (6.5%)	2 (1.0%)	199
having)	*assign*	27 (57.4%)	19 (40.4%)	1 (2.1%)	0 (0.0%)	47
	assure	505 (75.3%)	14 (2.1%)	152 (22.7%)	0 (0.0%)	671
	deny	180 (86.1%)	16 (7.7%)	13 (6.2%)	0 (0.0%)	209
	enjoin	18 (62.1%)	11 (37.9%)	0 (0.0%)	0 (0.0%)	29
	forbid	30 (60.0%)	7 (14.0%)	13 (26.0%)	0 (0.0%)	50
	grant	283 (76.1%)	87 (23.4%)	0 (0.0%)	2 (0.5%)	372
	offer	303 (79.9%)	61 (16.1%)	15 (4.0%)	0 (0.0%)	379
	order	117 (60.6%)	76 (39.4%)	0 (0.0%)	0 (0.0%)	193
	promise	588 (91.4%)	31 (4.8%)	24 (3.7%)	0 (0.0%)	643
	refuse	188 (92.2%)	12 (5.9%)	4 (2.0%)	0 (0.0%)	204
13.4.1	*provide*	148 (67.3%)	24 (10.9%)	36 (16.4%)	12 (5.5%)	220
(fulfilling)	*serve*	398 (87.7%)	56 (12.3%)	0 (0.0%)	0 (0.0%)	454
29.1 (*appoint*)	*swear*	112 (67.5%)	53 (31.9%)	1 (0.6%)	0 (0.0%)	166
29.4 (*declare*)	*account*	78 (71.6%)	27 (24.8%)	0 (0.0%)	4 (3.7%)	109
	prove	299 (85.9%)	49 (14.1%)	0 (0.0%)	0 (0.0%)	348
37.1	*appoint*	260 (66.8%)	126 (32.4%)	3 (0.8%)	0 (0.0%)	389
(message	*ask*	379 (91.5%)	18 (4.3%)	17 (4.1%)	0 (0.0%)	414
transfer)	*remember*	665 (93.4%)	31 (4.4%)	16 (2.2%)	0 (0.0%)	712
	show	871 (94.3%)	51 (5.5%)	2 (0.2%)	0 (0.0%)	924
	teach	74 (87.1%)	2 (2.4%)	9 (10.6%)	0 (0.0%)	85
37.2 (*tell*)	*tell*	2318 (91.6%)	134 (5.3%)	78 (3.1%)	0 (0.0%)	2530

Class	Verb	Active	DP	IP	PP	Total
37.7 (*say*)	*say*	4131 (89.6%)	479 (10.4%)	1 (0.0%)	0 (0.0%)	4611
37.9 (*advise*)	*advise*	217 (70.9%)	9 (2.9%)	80 (26.1%)	0 (0.0%)	306
	answer	495 (85.3%)	54 (9.3%)	30 (5.2%)	1 (0.2%)	580
	bid	241 (98.0%)	0 (0.0%)	5 (2.0%)	0 (0.0%)	246
	command	436 (84.5%)	7 (1.4%)	73 (14.1%)	0 (0.0%)	516
	inform	246 (48.3%)	10 (2.0%)	253 (49.7%)	0 (0.0%)	509
54.4 (*bill*)	*amerce*	0 (0.0%)	0 (0.0%)	4 (100.0%)	0 (0.0%)	4
	censure	8 (47.1%)	6 (35.3%)	3 (17.6%)	0 (0.0%)	17
	fine	6 (27.3%)	0 (0.0%)	16 (72.7%)	0 (0.0%)	22

Table 6   Variation among English indirect passives

From Table 6, it can be seen that verbs in late ME/EModE vary widely in the productivity of indirect passives, just as in Ancient Greek. Variation is especially noticeable within classes 13.3 and 37.1, which correspond loosely to classes B and C for the Greek verbs. However, there is not always a correspondence between the two languages in terms of which verbs within a given class form indirect passives; for example, although 24 indirect passives of *promise* were found, no indirect passives have been identified for the synonymous Ancient Greek *hupiskhnéomai*. In some cases cross-linguistic differences are due to independent grammatical factors; although indirect passives of Ancient Greek *marturéō* 'testify' are relatively common, English *testify* lacks a corresponding ditransitive construction with which to compare it (**testify someone something*). Within the English data, it can be seen that lexical gaps exist not only within the same class, as in Greek, but within the same stratum (i.e. among French loanwords):

(10) he hath byne allowed one

    'He has been allowed one' [BACON,II,258.289.4968, 1583]

(11) I have ben promised a sight of yt

    'I have been promised a sight of it' [CHAMBER,I,397.027.1131, 1612]

(12) *I have been granted this

Table 6 also shows a striking lexical gap which is common to both languages. The only indirect passives of *give* in *PCEEC* involve constructions of the type *I was given to understand this* (*pace* Stein et al. 2019).[12] Similarly, in Ancient

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12 The example cited by Stein et al. (2019: 225), *hym self is giffen all upon pleasure* [WY-ATT,67.008.225, 1538] is potentially ambiguous. Their interpretation follows the tagging used in the corpus, in which *all* is analysed as a direct object. However, an alternative interpreta-

Greek we have identified no clear indirect passives of *dídōmi* 'give' at all.[13] The fact that indirect passives are lexically restricted for such a prolonged period of time in both English and Ancient Greek supports the idea of a common basis for the analysis of indirect passives in both languages, despite certain differences between them in the manifestation of this phenomenon. What remains to be addressed, however, is the source of the lexical variation observed.

4   THE DEVELOPMENT OF INDIRECT PASSIVES

It has been shown that English and Ancient Greek have several traits in common: not only the emergence of a cross-linguistically infrequent indirect passive, but the lexical variability of these constructions and their slow diffusion through the lexicon.[14] Any theory seeking to provide a unified account of the indirect passive should be able to account for these properties. The analysis proposed here resembles previous accounts in suggesting that indirect passives arose through the reanalysis of constructions that were originally direct passives, although it differs from previous accounts in proposing that the result was a grammar including two types of passive constructions with different properties. A clue to the nature of the reanalysis taking place may be provided by the observation that in both English and Greek, indirect passives appear first among verbs with variability/ambiguity in their argument structure.

Before proceeding to an examination of the data, it may be useful to provide a brief exposition of the model of syntactic change assumed here. In keeping with much previous work (e.g. Roberts & Roussou 2003; Lightfoot 2006; Walkden 2021), we take the primary locus of language change to be the reanalysis by child learners of potentially ambiguous or opaque structures. As there is no necessary continuity between the grammars of one generation and the grammars of the next generation, this means that the minimum diachronic distance between grammars is one generation. In principle, syntactic changes may either have a single point of origin or originate from parallel reanalyses in multiple learners. In either case, the new grammar will spread

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tion, which may be more plausible in context, would be to treat *all* as adverbial; the sentence would then be a direct passive with the meaning 'he himself is dedicated entirely to pleasure'.

13 Interestingly, Holton, Horrocks, Janssen, Lendari, Manolessou & Toufexis (2019: 1929–1930) cite an indirect passive of this verb from the 16th century, after the era addressed here. If this is the case, then at least some varieties of Greek may have developed further in the same direction as English; additional work is needed to ascertain the extent in time and space of such constructions.

14 Further discussion of how such lexical variability may have been instantiated in the grammar is provided in Section 6

throughout the speech community at a rate determined by external factors (e.g. Blythe & Croft 2012). One vector of transmission is from speakers who have acquired the new grammar to their own children; this process introduces the possibility of further learner error and therefore further syntactic change. Greater variability/ambiguity in argument structure would thus be expected to correlate with greater potential for learner error.

Among the first Greek verbs to show the productive formation of indirect passives are *tássō* and its compounds. *Tássō* is a polysemous verb with a wide range of senses, including 'arrange', 'station', 'appoint', and 'assign' (see further Liddell, Scott & Jones 1940 s.v. τάσσω). Animate arguments occupy a variety of morphosyntactic and semantic roles, including accusative patient and dative recipient. In the sense 'order', *tássō* was normally construed with a dative addressee controlling an infinitive, as in (13), although there was also a rare alternative with accusative and infinitive, as in (14).

(13) ἑκάστῳ ἔταξαν[...] δέκα μὲν πελταστὰς προσελέσθαι

    hekástōi *étaxan*   *deka* *mèn* *peltastàs*
    each.DAT arrange.3SG.AOR ten   PRT peltast.ACC.PL
    proselésthai
    choose.INF.AOR.MID
    'They ordered each to choose ten peltasts' [Xen. Cyr. 1.5.5]

(14) σέ νιν τάξω φυλάσσειν

    sé   *nin*   *táxō*   *phulássein*
    you.ACC him.ACC arrange.1SG.FUT guard.INF.PRS
    'I shall order you to guard him' [Soph. OC 638]

Such accusatives were originally just the subject of the infinitive, rather than being an argument of the matrix verb itself.[15] The earliest examples of passives of *tássō* with an infinitive, such as (15), might have been intended by speakers as passives of the accusative construction seen in (14). In this way, they would be parallel to the passives seen in alternations such as (16)–(17), in which the subject of an infinitive can either remain in the lower clause, as

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15 Reviewers have raised the question of whether such sentences can be interpreted as ECM constructions, in which the accusative is an argument of the matrix verb. However, there is independent evidence against the existence of any ECM constructions in Ancient Greek (Sevdali 2007, 2013), as Ancient Greek had *accusativus cum infinitivo*: accusative subjects for infinitives that are so productive that they could not be argued to receive exceptional case.

when *tòn Sōkrátēn* remains accusative in (16), or be promoted to the subject of the higher clause, as when *Apóllōn* appears in the nominative in (17).

(15) φωνεῖν ἐτάχθην πρὸς σοφοῦ διδασκάλου

phōneîn   **etákhthēn**   *pròs*   *sophoû*
speak.INF.PRS   arrange.1SG.AOR.PASS   from   wise.GEN.SG
didaskálou
teacher.GEN.SG
'I have been ordered to speak by a wise teacher' [Aesch. Eum. 279]

(16) λέγεται τὸν Σωκράτην[...] εἰπεῖν ὅτι[...]

légetai   **tòn**   **Sōkrátēn**   *eipeîn*   *hóti*
say.3SG.PRS.MP   the.ACC.SG   Socrates.ACC   say.INF.AOR   that
'It is said that Socrates said that...' [Xen. Mem. 1.2.30]

(17) ἐνταῦθα λέγεται Ἀπόλλων ἐκδεῖραι Μαρσύαν

entaûtha   *légetai*   **Apóllōn**   *ekdeîrai*   *Marsúan*
there   say.3SG.PRS.MP   Apollo.NOM   flay.INF.AOR   Marsyas.ACC
'There Apollo is said to have flayed Marsyas' [Xen. Anab. 1.2.8]

However, constructions such as (15) could easily have been reanalysed as passives of the more common type seen in (13), with a dative addressee. This in turn could have led to the extension of dative–nominative alternation to passives such as (18), corresponding to an active construction such as (19) in which the animate argument is a recipient that can occur only in the dative.[16]

(18) ἐγὼ τελῶ ἃ ἐτάχθην

egṑ   *telô*   *hà*   **etákhthēn**
I.NOM   accomplish.1SG.FUT   REL.ACC.PL   arrange.1SG.AOR.PASS
'I shall accomplish what I have been assigned' [Rom. Mel. Cant. 8.23.4]

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16 A similar pathway of reanalysis has been proposed by Montalbetti (1999) for the emergent development of indirect passives in certain varieties of South American Spanish; at present these remain at the stage seen in (15), without having progressed to the stage seen in (18). Similarly, Beck & Butt (2024) discuss how comparable processes of reanalysis can lead to semantic differentiation such as Aktionsart shifts between active and non-active forms.

(19) ἔταξαν ἐμοὶ ταῦτα

    étaxan   **emoì**   *taûta*
    arrange.3PL.AOR me.DAT this.ACC.PL
    'They assigned these things to me'

The step by which such a reanalysis could have taken place are summarized in Figure 1. In this figure the dashed line signifies reanalysis, taking place when a person hearing a given construction associates it with a syntactic structure different from that intended by the original speaker; the dotted line signifies the extension of a syntactic process such as indirect passivization from a more restricted to a more general environment.
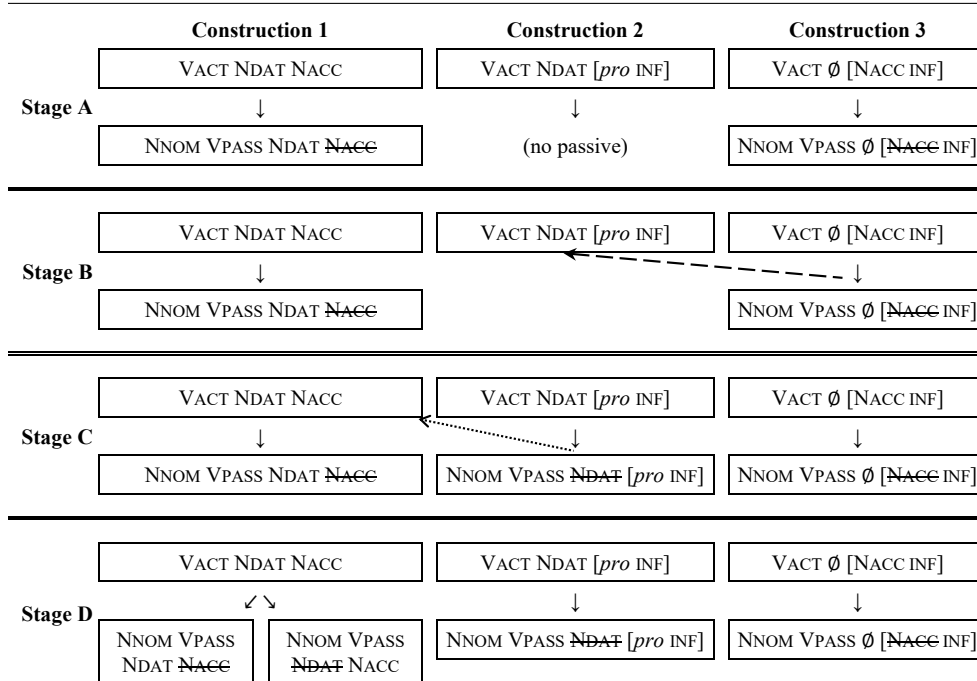

Figure 1   Reanalysis of passives in Ancient Greek

In Stage A, Construction 1 (i.e. the ditransitive construction) has a direct passive only; Construction 2, with a dative addressee and infinitival clause, has no passive, while Construction 3, the structure with the accusative and infinitive complement, allows passivization of the accusative as the nominative subject of the main verb (cf. example 17 above). In Stage B, the passive of Construction 3, despite differences in its underlying syntax, comes to function

suppletively as a passive counterpart to Construction 2; alternations between the two allows learners to reanalyse such passives as syntactically related to Construction 2. In Stage C, the passivization of dative arguments in Construction 2 provides a model for the extension of this possibility to Construction 1. This leads to Stage D, in which the passivization of datives has now also been generalized to Construction 1, so that a verb such as *tássō* now has symmetrical passives. One prediction of this model is that passives of dative addressees in infinitive constructions such as Construction 2 would have preceded those of Construction 1, i.e. constructions with nominal themes. Unfortunately, from the available evidence it is not possible to determine whether this prediction is borne out.

A question that has been raised by an anonymous reviewer is of the timing of the reanalyses proposed in Figure 1, namely whether they happen over time or all at once. This can be seen as a specific case of the more general problem of gradualness v. abruptness of change and the issue of *actualization* of reanalysis as described by Madariaga (2017: 73): "[a] new structure spreading to more marked and less frequent environments". Assuming a generative view of reanalysis of the sort described above, where this process happens at the point of acquisition, this would imply a fairly abrupt change whereby each of those steps may have lasted no more than one generation or so. However, given also the fact that speakers can have more than one grammar and that such situations can persist for some time, the possibility exists that these stages may have lasted longer. Moreover, the diffusion of this change may have been slowed by the relative rarity of the construction serving as the source of reanalysis (Verb + Dative + Infinitive). One possibility compatible with the data is that Stage A corresponded to Archaic Greek, Stage B to the start of Classical Greek, Stage C to the middle of the Classical period, and Stage D to the start of the Hellenistic period. Alternatively, the existence of at least some indirect passives in Classical Greek could be interpreted as evidence that Stage D had already been reached by the start of this period; in this case, the paucity of attestations before the Hellenistic period would reflect the typical lag between the rise of innovations originating in spoken language and their reflection in literary texts, a possibility which receives some support from the previously noted occurrence in non-literary texts such as papyri of indirect passives from verbs not attested elsewhere in such constructions. Similar complications exist in providing a precise date for Stage A. Not only is there a textual gap between Archaic and Classical Greek, but the surviving Archaic texts, such as the Homeric epics, are products of a long-standing and relatively artificial literary tradition (e.g. Tsagalis 2013). It is therefore possible that the process of reanalysis had already begun by this

period, but was not reflected in the surviving Archaic Greek texts; however, it is also possible that the reanalysis only began at a later period and that its earliest stages are lost in the aforementioned textual gap.

Polysemy and syntactic ambiguity of this sort are not unique to *tássō*; similar phenomena can be demonstrated for many other verbs listed in Tables 2, 3, and 4. For example, *parainéō* 'advise' and *sumbouleúō* 'counsel' both show variation between dative addressees and accusative subjects of infinitives similar to that described above for *tássō*.

(20) παραινῶ τῷ Νικοκλεῖ μὴ ῥᾳθυμεῖν

parainô   **tôi**   **Nikokleî**   *mḕ*   *rhāithumeîn*
advise.1SG.PRS the.DAT.SG Nicocles.DAT not shirk.INF.PRS
'I advise Nicocles not to be lax' [Isoc. 15 71]

(21) καὶ καταβῆναι αὐτὸν παρήνει

kaì   *katabênai*   **autòn**   *parḗinei*
and descend.INF.AOR him.ACC advise.3SG.IMPF
'And she advised him to come down' [Aesop Fab. 9.1]

(22) συμβουλεύομεν δὲ ὑμῖν δοῦναι ὑμέας αὐτοὺς Ἀθηναίοισι

sumbouleúomen *dè* **humîn** *doûnai*   *huméas*   *autoùs*
counsel.1PL.PRS PRT you.DAT give.AOR.INF you.ACC.PL self.ACC.PL
Athēnaíoisi
Athenian.DAT.PL
'We counsel you to give yourselves to the Athenians' [Hdt. 6.108.3]

(23) ἐγὼ μὲν οὖν καὶ δέομαι καὶ συμβουλεύω[...] συμβῆναι ὑμᾶς[...]
      εἰς τὸ μέσον

egṑ   *mèn* *oûn* *kaì* *déomai*   *kaì* *sumbouleúō*
I.NOM PRT so and beg.1SG.PRS.MP and counsel.1SG.PRS
sumbênai   **humâs**   *eis*   *tò*   *méson*
come-together.AOR.INF you.ACC.PL into the.ACC.SG middle.ACC.SG
'Therefore I both beg and counsel you to come to terms' [Pl. Prot. 337e]

Such variation is especially probable with verbs in this semantic domain. Under our analysis, the difference between (20) and (22) on the one hand and (21) and (23) on the other is roughly that between the English constructions *advise someone to do something* and *advise that someone do something*, and as in English the two types are largely interchangeable. It might also be noted that *mēnúō* has not only a construction with a dative animate argument, in the sense 'inform', but a construction with an accusative animate argument, in the sense 'inform against, denounce'; confusion between these senses is unlikely to have played a role in the ultimate origin of the indirect passive, but once it was already in existence as a possibility, the frequent passivization of animate accusatives may have had a priming effect that favoured the early appearance of passivized animate datives with this verb. *Enkheirízō* 'entrust' is similar to *mēnúō* in that it occurs with animate accusative arguments; these also occur as subjects of direct passives (e.g. Xen. Hell. 4.4.12), which could thus have provided priming for indirect passives of animate datives. Conversely, while *epibállō* resembles *(epi)tássō* in being highly polysemous, with a range of senses including 'throw upon', 'lay on', 'head towards', and 'be incumbent' (Liddell et al. 1940), accusative arguments are normally inanimate in all senses; it is thus unsurprising that indirect passives of *epibállō* are quite rare, being restricted to papyri even in post-Classical use. The only verb in these classes that does not clearly fit such a pattern is *marturéō*, which is relatively simple and unambiguous in its syntax and semantics. Our analysis predicts that *marturéō* would only have begun to form indirect passives once these were relatively well-established. Certainly it is not among the few verbs to form indirect passives in Classical Greek, although such negative evidence is of course far from conclusive.

The same variability in argument structure is also seen with many of the first English verbs to form indirect passives. Such variability is clearly shown by *ask*; as the following examples show, the positions of the animate and inanimate arguments can vary, as can the presence and choice of a preposition.

(24) and that was the cawse men wolde not axe hym the rentte

'And that was the cause (why) men would not ask him (for) the rent' [PASTON,I,27.007.103, 1445]

(25) I axe no more god of you[…] but a gosshawke

'I ask no more good of you but a goshawk' [PASTON,I,579.190.5943, 1472]

(26) And as for the generall lycens, I haue asked my lord of it

'And as for the general licence, I have asked my lord for/about it'

[PASTON,I,653.221.6672, 1487]

(27) I beg for my selfe those blessings I aske for you

'I beg for myself those blessings I ask for you' [CONWAY,65.014.517, 1652]

(28) Your father has diuers times sence you went asked for strawbery butter

'Your father has, divers times since you went, asked for strawberry butter' [HARLEY,61.019.636, 1639][17]

(29) He axed me for you

'He asked after you' [BASIRE,108.001.10, 1651]

Indirect passives such as (30) seem most closely related to the construction shown in (24); however, the existence of passives such as (31), corresponding to constructions such as (28) and perhaps also (29), may have been a contributing factor in their development.

(30) And then 't is probable Norff: & Suff: will be next askt the Question whether ther be a King or no

'And then it is probable Norfolk and Suffolk will next be asked the question whether there be a king or not' [KNYVETT,124.032.1153, 1643]

(31) Being not overhasty to declare any such thing afore ye be asked for it

'Being not overhasty to declare any such thing before you be asked for it' [CROMWEL,II,184.075.842, 1539]

Another relevant verb is *give*, for which infinitive constructions may also have played a role, as with *tássō* in Greek. It was noted in Section 3.3 that the earliest indirect passives of *give* occur with the phrase *given to understand*, of which the corresponding active forms (e.g. *They gave me to understand this*) are potentially ambiguous. Originally *me* in such a sentence was the indirect object, and the meaning was 'they gave me this in order for me to understand it' (cf. OED s.v. *give*); however, the relatively abstract nature of the idiom might have made this meaning opaque, and facilitated reanalysis as some sort of causative construction, 'they caused me to understand this'. One possibility is that these passives might have originated among speakers for whom

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17 Constructions involving an inanimate argument introduced by *for* do not happen to co-occur with an animate argument in this corpus; however, such constructions are already attested in other contemporary or earlier texts (cf. OED s.v. *ask*).

it had the latter structure; when these were heard by speakers for whom it had the former structure, they would have seemed to show passivization of an indirect object. Once this possibility existed, it could have given rise to unambiguous indirect passives such as *I was given a book*; as Figure 2 shows, such a development would closely parallel the proposal made for Greek.
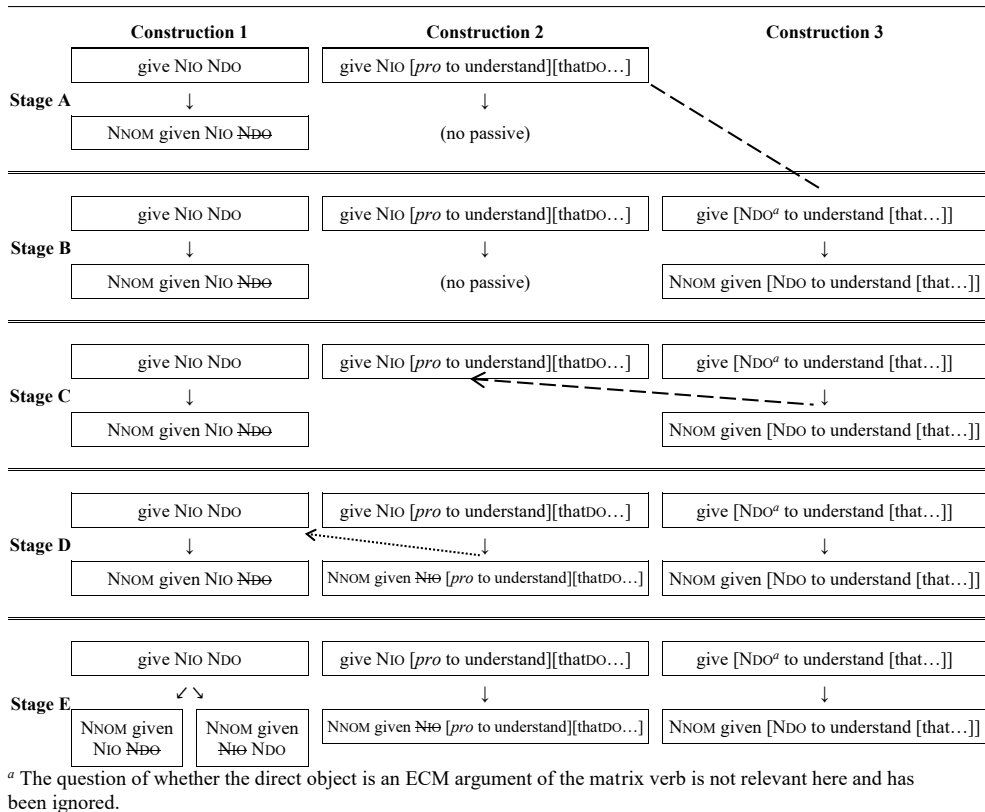
	Construction 1	**Construction 2**	**Construction 3**
Stage A	give N_{IO} N_{DO} ↓ N_{NOM} given N_{IO} ~~N_{DO}~~	give N_{IO} [*pro* to understand][that$_{DO}$…] ↓ (no passive)	
Stage B	give N_{IO} N_{DO} ↓ N_{NOM} given N_{IO} ~~N_{DO}~~	give N_{IO} [*pro* to understand][that$_{DO}$…] ↓ (no passive)	give [N_{DO}^{a} to understand [that…]] ↓ N_{NOM} given [N_{DO} to understand [that…]]
Stage C	give N_{IO} N_{DO} ↓ N_{NOM} given N_{IO} ~~N_{DO}~~	give N_{IO} [*pro* to understand][that$_{DO}$…]	give [N_{DO}^{a} to understand [that…]] ↓ N_{NOM} given [N_{DO} to understand [that…]]
Stage D	give N_{IO} N_{DO} ↓ N_{NOM} given N_{IO} ~~N_{DO}~~	give N_{IO} [*pro* to understand][that$_{DO}$…] ↓ N_{NOM} given ~~N_{IO}~~ [*pro* to understand][that$_{DO}$…]	give [N_{DO}^{a} to understand [that…]] ↓ N_{NOM} given [N_{DO} to understand [that…]]
Stage E	give N_{IO} N_{DO} ↙ ↘ N_{NOM} given N_{IO} ~~N_{DO}~~ | N_{NOM} given ~~N_{IO}~~ N_{DO}	give N_{IO} [*pro* to understand][that$_{DO}$…] ↓ N_{NOM} given ~~N_{IO}~~ [*pro* to understand][that$_{DO}$…]	give [N_{DO}^{a} to understand [that…]] ↓ N_{NOM} given [N_{DO} to understand [that…]]

[a] The question of whether the direct object is an ECM argument of the matrix verb is not relevant here and has been ignored.

Figure 2   One pathway for reanalysis in English

In Stage A the ditransitive construction, Construction 1, has only direct passivization, while Construction 2, with an infinitival purpose clause, has no passive. In Stage B, reanalysis (indicated again by the dotted line) has taken place; Construction 2 has been reanalysed as Construction 3, consequently allowing the animate object to appear as a nominative subject in the passive.[18] In Stage C, this new passive is analysed as potentially derived from Construction 2, i.e. as an indirect passive; this leads to Stage D, where the indirect

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18 We make no claim as to whether the two *give to understand* constructions would coexist for an individual speaker; the relevant reanalysis should be understood primarily as taking place between separate individuals within the same speech community.

passive is extended from Construction 2 is extended to more canonical ditransitives with two nominal arguments, i.e. Construction 1. This leads to Stage E, in which Construction 1 now has both direct and indirect passives. While direct evidence to substantiate this model may not be readily obtainable, it is nonetheless compatible with what is known about the chronology of passives with *give* in English.

If polysemy and ambiguity can be identified in the verbs forming indirect passives in both English and Ancient Greek, this phenomenon may have been a factor in their parallel development. Polysemous verbs have relatively unspecified roots, relying on context to fix their meaning (for several versions of such an analysis see Levin & Rappaport Hovav 2005; Borer 2005; Marantz 2013; Harley 2014). This underspecification makes them compatible with multiple case frames in Ancient Greek, as well as the multiple argument structures seen above in English. We propose that in both Ancient Greek and English, indirect passives arose through the misanalysis of constructions that were originally direct passives, involving the passivization of an accusative animate argument. This development may have taken place through the convergence of multiple, independent forms of reanalysis, such as those described above for *ask* and *give* (*to understand*). If this account is correct, it would explain why prototypical ditransitives such as *give* are among the last to form indirect passives, as they have the clearest and least ambiguous mapping between syntax and semantics (e.g. accusative = inanimate = theme, dative = animate = recipient); we would thus predict that similar patterns in the development of indirect passives would recur on a broader cross-linguistic basis.[19] It may also explain why French loanwords led in forming indirect passives in English; the first English speakers to make use of these verbs may not have had full knowledge of the argument structures existing in French, and hence the potential for multiple analyses would have been correspondingly greater.[20] One prediction following from this proposal is that languages in which ambiguity is not sufficient to attain these critical levels will not develop indirect passives, or will develop indirect passives of a differ-

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19 Another language that developed indirect passives later in its development, between the 17th and the 19th century, is Swedish (Haddican & Holmberg 2019; Falk 2022). Although a thorough comparison is beyond the scope of this paper, it is worth noting that *ge* 'give' is also among the verbs most resistant to indirect passivization (Haddican & Holmberg 2019: 108–109). Interestingly, some of the earliest verbs that allow indirect passives in Swedish are similar to the ones we see in English in Table 6, such as *pay*, *request*, *offer*, *promise*, and *entrust* (Falk 2022) As will be discussed further in Section 5, Swedish has another complexity shared with Ancient Greek: both diachronically and synchronically, prefixed verbs seem to be the earliest and most common in indirect passives.

20 Stein et al. (2019) discuss the potential influence of L1 English speakers with an imperfect knowledge of L2 French in Norman England.

ent sort (e.g. without this stage of lexical restriction). The absence of indirect passives in a language such as Latin may be related to the lack of such ambiguity; alternatively, other factors may have been involved, such as the availability of dependent/lexical/prepositional datives. Further work is required to ascertain the extent to which cross-linguistic differences in the availability of indirect passives conform to this model.

Another factor involved in the spread of indirect passives may have been affectedness. Direct objects, which are the prototypical arguments for passivization, are also the most prototypically affected; being primarily themes and patients, they represent entities undergoing movement and change. The first indirect objects to passivize also show a high degree of affectedness, and thus a greater semantic similarity to direct objects. The role of affectedness may explain patterns such as the earlier appearance of indirect passives for *mēnúō* 'inform' (4th c. BC) than for *parainéō* 'advise' (4th c. AD); an addressee of 'inform' is necessarily affected in the sense of undergoing a change of state in knowledge, but an addressee of 'advise' may or may not follow the advice and thus be affected by it. Nevertheless, for both these verbs there is a sense in which the addressee is more highly affected than the theme; once indirect passives existed in the language as a possibility, their use in topicalizing the most highly affected entity would have encouraged their expansion (cf. Seoane 2009). The other side of this coin is that the high affectedness of the IO can also be interpreted as relatively low affectedness of the DO. In Ancient Greek, we have observed that indirect object passivization is especially frequent when themes are clauses, perhaps the type of argument that is lowest in affectedness. This may also be seen clearly in Figure 2, where the reanalysis proposed in this paper involves theme arguments that are infinitival clauses.

5 Synchronic and diachronic differences between English and Greek

Despite the many similarities noted above, a number of differences also exist between English and Greek in the synchronic and diachronic status of the indirect passive. English has developed not only an indirect passive but a prepositional 'pseudo-passive', seen in constructions such as *I was spoken to*, while Greek seems never to have developed an equivalent of such constructions. However, as mentioned in Section 2.4, many of the verbs forming indirect passives in Ancient Greek are prefixed compound verbs, while in English many of the earliest verbs to form indirect passives are unprefixed (e.g. *ask*) or have prefixes that are synchronically opaque (e.g *allow*), nor does the indirect passive seem to be facilitated by the presence of prepositions or adverbial particles occurring as separate phonological words. The distribution found

in Greek is compatible with the analysis of Greek ditransitives as assigning dative or genitive case via prepositions, which may be incorporated into the verb (cf. Anagnostopoulou & Sevdali 2015, 2020); on such an analysis, the unprefixed cases would involve a null P. In this respect, the indirect passives in Ancient Greek may actually be akin to English pseudo-passives, with the preposition being incorporated in Greek but not in English because of differences in the syntax of prepositions in the two languages (cf. Alexiadou et al. 2014).[21] Even if this is so, however, the Ancient Greek indirect passive would still have a close syntactic parallel in English; moreover, the diachronic development of prepositional pseudo-passives in English is broadly parallel to that of indirect passives (e.g. Denison 1993; Allen 1995). It is worthy of note that, as mentioned above, prefixed and unprefixed verbs in Swedish behave differently in their passivization behaviour; Haddican & Holmberg (2019) find that both direct and indirect passives are more widely acceptable for the former, although they argue explicitly against a preposition-incorporation analysis for Swedish. One interesting avenue for future work would be a contrastive investigation of Ancient Greek and Swedish, especially given that not only are prefixed verbs among the first to allow indirect passives, but prefixes seem to assign case to indirect objects in both languages. Alternatively, the association in Ancient Greek between prefixes and indirect passives may be epiphenomenal; many unprefixed ditransitives have canonical meanings such as 'give' and 'send', with correspondingly unambiguous syntax, and it may be that prefixation simply represents the most productive means of generating new, less canonical ditransitives with a correspondingly greater potential for ambiguity and reanalysis. Although further work is needed to develop robust diagnostics that would allow these possibilities to be differentiated, we would expect that the analysis proposed here would be broadly applicable in either case.

English and Greek differ most conspicuously in terms of the diachronic paths followed by indirect passives. In English the indirect passive construction has been extended to virtually all verbs taking two non-prepositional internal arguments (but see e.g. Fellbaum 2005 regarding some constraints on its use). As Denison (1993) has observed, this extension may have been relatively recent, as late as the mid-20th century. However, such an extension seems never to have taken place in Greek, in which these constructions were ultimately lost; as a great deal of lexical replacement took place between Ancient and Modern Greek, the lexically restricted nature of the indirect passive may have meant that it could not survive the loss of too many of the verbs

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21 Under such an analysis, the loss of indirect passives in Greek may be related to changes in the compositionality of Greek prefixed verbs (see Asyllogistou 2019).

with which it occurred.[22] One avenue to explore in order to understand better the diachrony and eventual demise of indirect object passivisation in Greek is to look into the diachrony of the ACC–GEN class. This class would provide a valuable test case for our proposal on the role of polysemy and syntactic ambiguity in indirect object passivization, with additional verbs. Moreover, it would be interesting to investigate a class where the diachronic development of indirect passives was not complicated by changes to the morphological case system, given that the dative was lost but the genitive survived in Greek. As mentioned above, ACC–DAT verbs were chosen as the focus of the present work owing in part to their greater value for a comparative study involving English; while the issue of ACC–GEN verbs must remain open for further research, it is a natural next step for investigation. The later stages of the development of indirect passives remain obscure in many respects for both English and Greek, and additional work on this topic would be valuable; unfortunately, in the case of Greek such a task is complicated on the one hand by the persistence of highly archaizing syntax as a literary device and on the other by the relative scarcity of more vernacular documents for the relevant period.

6 Conclusion

English and Ancient Greek share a trait which is far from universal, the development of an indirect passive. In both languages, the earliest stages of this construction are characterized by a high degree of lexical variation; only verbs whose arguments have an appropriate thematic role may form indirect passives, but many verbs with appropriate arguments apparently fail to do so. This lexical variation is especially significant in that current analyses of indirect passives, as discussed above, predict that these constructions should be fully available to all syntactically and semantically compatible verbs as soon as they exist as a grammatical possibility. The existence in both English and Greek of substantial lexical variation, over a long enough period to suggest that this is not merely a sign of "grammar competition" but a stable state in its own right, suggests that a new analysis may be needed and provides further support for the treatment of these developments in English and Greek as related phenomena. Further work is needed to determine whether the devel-

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22 Not all relevant lexemes were completely lost; for example, *epibállō* has a reflex in Modern Greek. Yang's (2016) Tolerance Principle suggests that learners would cease to acquire the construction when input of relevant lexemes dropped below a given threshold; however, estimating the actual input received by learners in historical settings is very difficult, especially given the persistence of many lexemes in literature after they had largely been lost from spoken usage. While this looks like a promising avenue to explore, the methodological complications involved mean that we must leave this issue for further research.

opment of indirect passives in other languages exhibits similar traits; given the many other syntactic differences between English and Greek, it would be surprising if the patterns described here were restricted exclusively to these two languages.

Given the associations observed between the indirect passive and specific lexemes, a reviewer has raised the question of whether indirect passives should be considered "lexical passives". Such an approach would be comparable to the analyses of passives in Modern English proposed e.g. by Bresnan (1982), in which passives are essentially treated as the outcome of a derivational process. From our perspective, if the indirect passive in Ancient Greek were a lexical passive, this would have to mean that the passive form of a verb existed as such in the lexicon and entered the derivation already "passive", i.e. without an external theta role and case for its object. However, such an approach would completely divorce indirect passives from direct passives, and would also fail to predict any cross-linguistic similarities such as those observed between Ancient Greek and English; an analysis of indirect passives as lexical passives might thus create more problems than it would solve. We feel that the observed properties of indirect passives are best interpreted not in terms of lexical derivation but in terms of lexical *diffusion*. There are many diachronic changes, such as changes in verb complementation, that have been shown to spread gradually from one lexeme to another, and in time such changes may extend to all eligible lexemes (e.g. Harris & Campbell 1995: 107 with references); however, from a synchronic perspective what varies is the mapping between individual lexemes and syntactic operations. Our analysis interprets the spread of indirect passives simply as a special case of such lexical diffusion.

Indirect passives in both English and Ancient Greek are found first among verbs whose variable argument structure has the potential to create ambiguity regarding the syntax of passives. We propose a development of indirect passives along the lines laid out in Table 7.[23] However, despite the similarities in their initial development, the syntax of indirect passives in Ancient Greek and English may not have been completely identical; in English pseudo-passives developed beside indirect passives as a formally distinct category, while Greek has a single formal category which nevertheless shows differential behaviour between prefixed and monomorphemic verbs. The history of these constructions in English and Greek undoubtedly diverged at a later stage, leading to their generalization in English and eventual extinction in Greek. If the lexically restricted nature of these constructions played a role in their development both in Greek and in English, the history of indirect pas-

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23 The first four stages correspond broadly to those shown in Figure 1.

Stage A: Only direct objects may passivize

Stage B: Direct passives in ambiguous contexts are reanalysed as indirect passives

Stage C: Indirect passives are extended to unambiguous contexts ("isolating contexts" in the terminology of Diewald 2002)

Stage D: Indirect passives become a productive device, dependent in some way on lexically stored properties of individual verbs

Stage E1: Indirect passives become fully generalized and available to all verbs with appropriate syntax (English)	Stage E2: Indirect passives are lost, and so are many of the lexemes with which they were associated (Greek)

Table 7 Outline of the development of indirect passives

sives may also serve to emphasize the importance of such lexical variation in the general evolution of languages. It can also demonstrate the value of focusing on such seemingly 'exceptional', 'marked' or 'restricted' structures and their evolution, as well as the value of studying 'rise and swift fall' cases of change that ultimately fail to generalise, in addition to changes that proceed to completion. Such relatively ill-studied phenomena have the potential to improve our understanding of language change in general.

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