

Chapter 6

Verbal semantics and differential object marking in Lycopolitan Coptic

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This paper seeks to clarify the role of affectedness for the marking of direct objects through an analysis of a corpus of Lycopolitan Coptic texts (4th to 5th centuries AD). Whereas previous research has shown the importance of definiteness for the use of the direct object marker *n* with the so-called imperfective tenses (present and imperfect), it has proven more difficult to establish why it alternates in the non-imperfective with a zero marker. An attempt is made here to correlate the two different object constructions to Tsunoda's verb-type hierarchy, which was conceived to capture the degree of affectedness. It appears that the more affected a direct object is, the more likely it is to receive the direct object marker; whenever the object is little affected or unaffected, the zero-marked construction is preferred.

1 Introduction

Most works that have tried to explain Differential Object Marking (DOM) have focused on the semantic and information-structural properties of the direct object (animacy, definiteness, specificity, or topicality). There are a few languages for which the identification of the triggering factor behind DOM may be quite straightforward, such as definiteness in Modern Hebrew (Danon 2001) or specificity in Turkish (Enç 1991), but more commonly a multidimensional DOM system results not from a single factor, but from several interacting factors

One language with a multidimensional DOM is Coptic (Afro-Asiatic, Egyptian branch, now extinct).¹ Coptic DOM has received far less attention one might expect, given that Coptic has a long tradition in academic studies. Indeed, it is still unclear what exact factors are operative and how they relate to each other. The present study aims to show how the verb type, which is defined through the degree of affectedness found with the object,

¹Egyptian is divided into the following language stages: Old Egyptian (c. 3100–2000 BC), Middle Egyptian (2000–1350 BC), Late Egyptian (1350–700 BC), Demotic (700 BC–AD 452) and Coptic (AD 200–1400). For a useful grammatical overview see Haspelmath (2015). For a detailed diachronic description aimed at a linguistic readership, see Loprieno (1995).



influences whether the object is marked as such or receives no marking. This will be done through a corpus-based study of Lycopolitan, an early literary variety (traditionally and henceforth “dialect”) of Coptic that was prevalent in the 4th and 5th centuries AD. The analysis indicates that the overtly marked construction is favoured by the presence of a highly affected object, whereas the zero-marked construction is favoured whenever the object is little affected or unaffected by the verbal action. Beside the value of such a study for our understanding of argument marking in Coptic itself, a wider knowledge of Coptic data should be of interest to linguistics because Coptic presents a system that is markedly different from better-explored patterns of DOM.

This paper is structured as follows. §2 provides a synthesis of Coptic object marking, including a summary of previous research. §3 contains a short description of the corpus of Lycopolitan texts and presents some background data. §4 presents an overview of the role of verbal semantics in research into DOM, and introduces some theoretical work on how verbs can be arranged on semantic grounds in broad verb-type categories. In §5, statistics are provided for the realisation of the object in Lycopolitan Coptic in relation to the verb types. The analysis suggests that the distribution of two alternating object constructions depends on the degree of affectedness of the object. In §6, the relationship between affectedness and other factors is discussed. Finally, §7 contains a summary and preliminary conclusions.

2 Argument realisation in Coptic

Coptic DOM is of the asymmetric type (de Hoop & Malchukov 2008; Iemmolo 2013), in which the direct object is either overtly marked with a preposition or zero-marked. The marker before NPs is a preposition, *n* (before labials *m*), the origin of which is ultimately locative. A longer form, *mma*, is used preceding the clitic person markers.² Both are subsumed in the following under the term *n*-marking. Note that one often has a double marking of the transitive construction, because many verbs have separate allomorphs depending on which object construction is used. The verbal allomorphs are, by and large, distinguished by different vowels because of the shape of the syllable and stress rules. The *n*-marked object appears only after the regular stem of the verb with a full vowel carrying stress (e.g. *nouje* ‘to throw’, see Table 1). A zero-marked NP, on the other hand, can appear both after the regular stem and as an allomorph of the verb with a reduced vowel.³ For some morphological classes of the verb only one allomorph is used before zero-marked NPs and personal pronouns. Thus, the verb ‘to throw’ can assume the form *naj* before NPs and personal clitics (exemplified in Table 1, through the 3 msg. pronoun *f*).

²In Sahidic, the supra-regional dialect of the south, the equivalent forms are *n* and *mma*. Both forms derive from the preposition *m*, used in older Egyptian for location in something (‘essive’) as well as for motion away from something (‘elative’), from whence derives the partitive meaning that seems to have given rise to object marking (Winand 2015).

³Only the latter is possible in many other dialects. I have deliberately not distinguished these two cases in the counts in the tables, because I wish to avoid a digression on the morphology of the verb classes.

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Table 1: Verb allomorphs and object marking in Lycopolitan

<i>n</i> -marked O	<i>nouje n</i> NP / <i>nouje mma-f</i>	—
zero-marked O	<i>nouj</i> NP / —	<i>naj</i> -NP / <i>naj-f</i>

There are also verbs that have different allomorphs with zero-marked objects, depending on what follows them. For instance, the verb *eire* ‘to make’ or ‘to do’ assumes the form *r* in front of NPs, while it becomes *ee* alt. *eit* in front of personal clitics.

The rules governing the selection between the *n*-marked form and the zero-marked form are far from clear. A few important observations that have been made in the past are summarised here and in the following subsections (§2.1–§2.2).

Case marking occurs only in the post-verbal position (this also applies to subject marking, see Grossman 2015). When an object is fronted, a familiar strategy for topicalisation, it is then not case-marked but is resumed postverbally through the appropriate person marker. Both *n*-marked and zero-marked objects occur (1a–1b):

- (1) a. *t-mnt-lilou* *a-i-t^hbio* *mma-s*
 DEF.F-ABST-youth PST-1SG-subdue ACC-3F.SG
 ‘Youth I subdued’ (Psalm-book 88, 27)
- b. *eis* *p-kah* *m-p-keke* *a-n-šab-f*
 PTCL DEF.M-land GEN-DEF.M-darkness PST-1PL-devastate-3M.SG
 ‘Look, the Land of Darkness we devastated’ (Psalm-book 201, 23)

Object marking with *n/mma* is also found in some non-differential contexts. For example, *n*-marking must be used whenever the direct object is separated from the verb by any element. In the following example (2), the object (*tef-hikôn*) is preceded by *n* due to the placement of the verbal particle *abal*. Zero-marked objects are only allowed when the object directly follows the verb with no intervening element.

- (2) *ša-p-sêu* *etere p-iôt* *na-côlp* *abal n-tef-hikôn*
 until-DEF.M-time REL DEF.M-father FUT-reveal PTCL ACC-POSS.3M.SG-image
n-t-pe *mma-u* / (**côlp* *abal* *tef-hikôn*)
 ADV-DEF.F-sky PREP-them / *reveal PTCL POSS.3M.SG-image
 ‘until the time when the Father will reveal his image above them’ (Kephalaia 103, 6)

Furthermore, the majority of verbs borrowed from Greek have their objects introduced with *n/mma* (3). This is determined by the valency of the verb and is not a differential environment and, consequently, Greek loan-verbs are not treated in this paper.

- (3) *a-s-panhoplize* *mma-f*
 PST-3F.SG-arm ACC-3M.SG
 ‘She armed him’ (Kephalaia 39, 4)

It has long been recognised that *n*-marking is used with an NP only when the latter is determined by any of the articles (definite or indefinite), the possessive determiner, or a demonstrative. The *n*-marking is not used with a bare noun, which signals a generic and indefinite sense. It would thus seem as if Coptic DOM conforms to the definiteness hierarchy: personal pronoun > proper noun > definite NP > indefinite specific NP > non-specific NP (e.g. Aissen 2003: 437). The cut-off point along this scale differs between the main two TAM categories (imperfective vs. non-imperfective), but the lowest ranked category (non-specific NPs) is excluded in both. As definiteness is an all-pervasive feature (irrespective of TAM), it can be said to be the single most important factor for the selection of *n*-marking in Coptic (cf. Sinnemäki 2014: 309).

2.1 Imperfective tenses

There is a TAM-based split in the distribution of object marking, to the effect that the *n*-marked form is obligatory with the imperfective tenses (present and imperfect) when the object is grammatically definite, and optional, it seems, with all other tenses (see §2.2).⁴ This means that the *n*-marked form was used with personal pronouns (4), demonstratives (5), and NPs preceded either by the definite article (6) or the indefinite article (7) whenever the verb is in the present or the imperfect:

- (4) *etbe peei pa-eiôt maeie mma-i / (*merit-∅)*
 because DEM.M POSS.1SG-father love ACC-1SG / *love-1SG
 ‘Because of this my father loves me’ (John 10: 17)
- (5) *auô tes-ke-meeu ne-s-jou n-neeï / (*je-neeï)*
 and POSS.3F.SG-also-mother IMPF-3FSG-say ACC-this.N / *say-this.N
 ‘And also her mother was saying this’ (Acts of Paul 11, 25)
- (6) *anak ti-saune m-pa-eiôt / (*souôn-pa-eiôt)*
 1SG 1SG-know ACC-POSS.1SG-father / *know-POSS.1SG-father
 ‘I know my father’ (John 10: 15)
- (7) *p-et-šôl n-ou-ônh abal / (*šal-ou-ônh)*
 DEF.M-RELshed ACC-INDF-life out / *shed-INDF-life
 ‘He who sheds a life’ (Psalm-book 39, 26)

The rule of obligatory marking also holds true for the possessive determiner (8) that is formed from the definite article marking the gender and number of the possessee, to which the appropriate personal marker for the possessor is affixed.

⁴The rules governing object marking with the imperfective tenses were first described by Ludwig Stern (1880) before being elaborated by Pëtr Viktorovič Ernštedt (Jernstedt 1927), for which reason they are known as the Stern-Jernstedt rule in Coptological jargon.

- (8) *hama=nde* *an* *ne-s-maeie* *n-tes-šêre*
 at.the.same.time=but also IMPF-3F.SG-love ACC-POSS.3F.SG-daughter
phalkônilla / (**meri-tes-šêre*)
 Falconilla / *love-POSS.3F.SG-daughter
 ‘at the same time she also loved her daughter Falconilla’ (Acts of Paul 22, 17)

Grammatically definite objects are marked irrespective of specificity. In general, both specific and non-specific NPs are *n*-marked. Exceptions to this occur whenever a light verb forms a verbal expression together with its syntactical object, as in the following example (9), with *r-p-meeue* ‘to remember’ (lit. ‘to do the remembrance’). *N*-marking is attested with light verbs in other dialects and texts (Layton 2000: 133).

- (9) *ntaf* *n-šarp* *p-et-hn-plêrouma* *p-et-ah-tôbh* *mmaf*
 3M.SG ADV-first DEF.M-REL-in-Pleroma DEF.M-REL-PST-pray ACC-3M.SG
auô *e-f-r-p-meeue*
 and CIRC-3M.SG-do-DEF.M-memory
 ‘The one who is in the Pleroma was what he first prayed to and remembered’
 (Tripartite tractate 81, 30–32)

There is one lexical exception to this pattern, where the definite article has no influence on object marking with the imperfective tenses. The verb *ouôš* ‘to want’ is always used with a zero-marked definite object, as seen in (10):⁵

- (10) *e-u-jpo* *m-p-et-⟨ou⟩-ouaš-f* / (**ouôš* *mma-f*)
 CIRC-3PL-give.birth ACC-DEF-3PL-wish-3M.SG / *wish ACC-3M.SG
 ‘they begetting what they wish’ (Tripartite tractate 64, 15)

Language history has been evoked to explain this exception. It has been suggested that the distinction between the two different frames – *wh3 n O* ‘to look for’, contrasting with *wh3 O*, ‘to wish’ – was made at the earlier stage of the language (Demotic), and is preserved here (Depuydt 1993). In §5 I will offer an alternative functional explanation, which is based on an observation of Coptic data.

When no determiner is present, the object is zero-marked (11). In such a case the noun is non-referential and non-specific, and does not reappear in the discourse. Zero-marking usually applies to indefinite pronouns as objects, but there are counter-examples, such as the one found in the first part of the sentence quoted in (12).⁶

- (11) *ti-šp-hmat* *n-toot-k* / (**šôp* *n-hmat*)
 1SG-receive-grace from-hand-POSS.2MSG / *receive ACC-grace
 ‘I receive grace from your hand [i.e. ‘I thank you’] (John 11: 41)

⁵In accordance with the Leiden Conventions for Papyrology, I use square brackets for restorations, and angled brackets for text omitted by the ancient scribe.

⁶One may try to attribute a specific reading to the object in (12), which would be awkward, or else one can explain the use of *n*-marking with *saune* ‘to know’ in morphological terms (see §5.3).

- (12) *f-saune* *n-laue* *en* / (*?f-senouôn-laue* *en*) *oude*
 3M.SG-know ACC-something NEG / *3M.SG-know-something NEG nor
f-r-laue *n-hôf* *en* *an*
 3M.SG-do-something GEN-thing NEG also
 ‘It [sc. the fruit] knows nothing, nor does it do anything’ (Gospel of Truth 28, 9–10)

I have not found in my corpus of Lycopolitan Coptic any example of a proper noun as an object with the imperfective tenses, but data from other dialects show that *n*-marking must be used in such cases. As is apparent from the above, semantic and morphological definiteness triggers the marking of the object.

Note that object marking is an innovation in the evolution of the Egyptian language. Afroasiatic case has not left any indisputable traces. Differential marking with the preposition *n* started to appear around 1000 BC, first in the imperfective as a marker of the unbounded aspect (Winand 2015; cf. Engsheden 2006: 218–219), but it spread to the non-imperfective tenses in the first millennium AD.

2.2 Non-imperfective tenses

The rationale behind the alternating use of *n*/ \emptyset with non-imperfective tenses is less clear. Coptic is rich in various TAM forms that are often labelled in an idiosyncratic way. What I call non-imperfective TAM forms covers every verbal form other than the present and the imperfect.⁷

The non-imperfective is a negatively-defined term that is used here as a label only: it encompasses the perfective as well as aspectually neutral forms. I include the future among the non-imperfective tenses. This differs from the tradition in Coptic linguistics to include the future, which is characterised by the infix *na-* (traditionally known as the ‘first future’), along with the present and the imperfect, among the imperfective tenses.⁸

With the non-imperfective tenses (including the future), *n*-marking appears optionally with personal pronouns and NPs that have any of the three determiners: the indefinite, definite, or possessive articles. The common view of non-imperfective tenses among Coptologists is that “non-zero objects fluctuate (by speaker’s stylistic choice)” (Layton 2000: 132). One leading Coptologist has even stated that *n*-marking and zero-marking of the object “are generally understood to be functionally equivalent” (Emmel 2006: 41). At first glance, this appears to be true, because both constructions are found in more or less identical contexts, as in (13a)–(13b), where both phrases have the same verb in a terminative subordinate clause:

⁷The group comprises past, future, optative, jussive, aorist, conditional, imperative, and a verb form called conjunctive that is used for subsequent action, etc.

⁸There are historical reasons for dividing Coptic TAM forms into two groups: the so-called adverbial/bipartite/durative pattern (i.e. my imperfective) vs. the verbal/tripartite/non-durative pattern (my non-imperfective). As the future tense form mostly appears in non-imperfective contexts, and shares its argument realisation strategies with non-imperfectives, I believe that the Coptic future is better classified among the non-imperfective tenses (following Quevedo Álvarez 2001). For this reason, counts for the future are included among the non-imperfective tenses in this article.

- (13) a. *šant-i-jak-pa-agôn*
 until-1SG-complete-POSS.1SG-struggle
 ‘until I complete my struggle’ (Psalm-book 93, 9)
- b. *šant-i-jôk* *m-pa-agôn*
 until-1SG-complete ACC-POSS.1SG-struggle
 ‘until I complete my struggle’ (Psalm-book 149, 19)

It should be noted that employing DOM with non-imperfective tenses is a relatively late phenomenon. There are no unequivocal examples of it from Demotic, the language stage that immediately preceded Coptic. Object marking in Demotic is restricted to the imperfective tenses, so that the extension of DOM into the non-imperfective tenses must be considered as being only a little older than the oldest texts in Coptic.

2.3 Previous research on DOM with the non-imperfective tenses

To find out whether the two alternating constructions really are functionally equivalent, it is best to undertake a corpus-based statistical investigation. I have in two previous papers (Engsheden 2006; 2008) analysed the canonical gospels in Sahidic Coptic (the supra-regional dialect of the south). I argued that Coptic can indeed be analysed as an example of a language with DOM, and that the selection of the *n*-marked form was determined by both referentiality (or specificity) and topicality (Engsheden 2006: 209–212; Engsheden 2008: 329–335), while further possible factors included semantic features such as degree of affectedness and causation. No evidence was found for Coptic DOM being sensitive to animacy.

A pertinent example for demonstrating that the marked form corresponds to the topic is found in the story of John the Baptist, whose head is what the story is about. Here, as elsewhere in this study, I mean by topic an aboutness topic, i.e. “the presupposed part of which pieces of information are conveyed” (Iemmolo 2010: 262), operating on sentence level. I cite here my original Sahidic example since the Gospel of Matthew is not preserved in Lycopolitan. Immediately before this passage, Salome has asked her stepfather the king to give her the head of John the Baptist (14a–14g):

- (14) a. *a-f-lupei* *nci-p-rro* *emate*
 PST-3M.SG-grieve AGT-DEF.M-king much
- b. *etbe* *n-anauš=de* *mn* *n-et-nêj* *nmma-f*
 because DEF.PL-oath.PL=PTCL with DEF.PL-REL-recline.STATE with-3M.SG
- c. *a-f-ouehsahne* *e-ti* *mmo-s* *na-s* *a-f-joou*
 PST-3M.SG-command to-give ACC-3F.SG to-3F.SG PST-3M.SG-send
- d. *a-f-fi* *n-t-ape* *n-iôhannês* *hm-pe-šteko*
 PST-3M.SG-carry ACC-DEF.F-head GEN-John in-DEF.M-prison
- e. *a-u-eine* *mmo-s* *hijm* *p-pinaks*
 PST-3PL-bring ACC-3F.SG on DEF.M-platter

- f. *a-u-taa-s* *n-t-šeere* *šêm*
 PST-3PL-give-3F.SG to-DEF.F-girl little
- g. *a-s-eine* *mmo-s* *n-tes-maau*
 PST-3F.SG-bring ACC-3F.SG to-POSS.3M.SG-mother

‘The king grieved much. Because of the oaths and those who lay at table with him, he commanded to give it (sc. the head) to her, (and) he sent and beheaded John in the prison. It was brought on a platter and given to the little girl, (and) she brought it to her mother’ (Matthew 14: 9–11)

The head is reactualised in (14c) through an *n*-marked pronoun. In (14d) it is referred to by means of the repetition of the NP, and mentioned next in (14e) with an *n*-marked pronoun before it appears in (14g), once more with an *n*-marked pronoun. Note that the original Greek text here does not have any object pronoun, so there is no influence from the original on the use of *n*-marking. The omission of pronouns for the object in Ancient Greek correlates to high topicality (Luraghi 2003), which lends support to my analysis.

The identification of topicality as a factor for the marking of the direct object was made by observing pronominal anaphora, and how they contribute to the discourse coherence. It is more difficult to demonstrate a similar topical function for full NPs. As with extinct languages in general, it is often difficult to investigate discourse-pragmatic features because the competence of native speakers is replaced by a closed corpus of texts. It is however not surprising to discover that topicality is a factor for DOM, because it has been recognised as such in a wide range of languages (Dalrymple & Nikolaeva 2011: 125–139; Escandell-Vidal 2009; Iemmolo 2010; Shain & Tonhauser 2010). Accordingly, I posit that the identification of topicality as a factor in DOM, as suggested for Sahidic Coptic in my previous articles, is also relevant for Lycopolitan Coptic.⁹

Topicality relates to definiteness in such a way that topics are mostly definite, whereas it is less likely that indefinites appear as topics in discourse. It is often taken for granted that topics are specific, even though this is not a necessary condition, at least in Romance languages (Leonetti 2013: 138–140). The idea that topicality is *the* trigger for DOM in the non-imperfective tenses is made problematic because marking varies in frequency depending on the semantic verb type, as will be illustrated below in §5. Topicality cannot account fully for the variation *n*/ \emptyset , since there is no reason for some verbs to never be followed by a topical object. Of those verb types that disprefer *n*-marking with non-imperfective tenses, simple zero-marked nouns must also be able to function as topics as one would not expect to encounter any lexical restrictions on verb, depending on the topical function of the object. A similar uneven distribution of the marker *a* in Spanish led Delbecque to state “if the discourse function were the *raison d’être* of the prepositional frame, then, the preposition should be able to appear after any transitive verb” (Delbecque 2002: 85). Consequently, topicality must work in conjunction with other factors in order to produce DOM in Coptic.

⁹Lycopolitan had a closer relationship to Sahidic than to any other Coptic dialect (Funk 1988; Kasser 2002: 343).

Specificity also plays an important role for *n*-marking in the non-imperfective tenses. In the example in (15), the definite article is used in a generic sense without reference to any specific individuals and, hence, there is no marking on the object:

- (15) *tehm-n-hêke* *mn-n-et-mokh* *mn-n-cale* *mn*
 invite-DEF.PL-poor and-DEF.PL-REL-afflicted and-DEF.PL-lame and
n-blle
 DEF.PL-blind
 ‘Invite the poor, the afflicted, the lame and the blind’ (Luke 14: 13)

This example is from Sahidic, but it is not difficult to find examples also in Lycopolitan Coptic (see 20).

3 Data and methodology

Lycopolitan Coptic (Nagel 1991) was rediscovered at the beginning of the 20th century through the discovery of manuscripts from Middle Egypt that date to the 4th and 5th centuries AD. Lycopolitan can be divided into the following subdialects (Table 2), for which conventional labels are used (cf. Kasser 2006: 418–420).

Table 2: Lycopolitan subdialects

L4	Manichaean texts from Medinet Madi (including Homilies; Kephalaia; Psalm-book) ¹⁰
L5	Gospel of John (only Chapters 2–20)
L6	Gnostic texts from Nag Hammadi; Acts of Paul
L9	Manichaean texts from the Dakhla oasis

Orthographical/phonological criteria form the basis of these subdivisions, with less attention being paid to grammatical features. L4 is the most important subdialect by size, and makes up almost two-thirds of the entire Lycopolitan text corpus. It is expected to grow as there is still unpublished material. The main representative of L5 is largely derived from a Sahidic *Vorlage* of the Gospel of John (Askeland 2012: 195–207). L9, known from texts discovered as late as in the 1980s, is the only subdialect to include original documentary material, whereas all preserved texts from the other subdialects seem to be translations from Greek, even though a translation directly from Syriac is sometimes invoked for some of the L4 texts. I have deliberately omitted two fragmentary leaves of the Pauline epistles, which have been classified as L3 (Kasser 2006: 419). Not only is the dialectal identification controversial, but the texts offer too little in matters of object marking to warrant their inclusion in this study. It should be noted that the internal

¹⁰I have used the older editions (Allberry, Böhlig, Polotsky), but these differ little with regard to objects from the still-incomplete re-edition in *Corpus fontium manichaeorum*.

relationships of the Lycopolitan varieties and their background are still a matter of discussion. Some commentators have even questioned whether they should be classified as a discrete group among the Coptic dialects (Funk 1985, cf. Kasser 2002).

To undertake a quantitative analysis of this corpus, I have built a relational database that includes all instances of the *n*/ \emptyset variation from published Lycopolitan texts (with the exception of L3),¹¹ which contains 7244 entries. The database contains only those syntactic contexts that would potentially allow DOM marking, so cases where the *n*-marking is part of the valency, such as *amahte* ‘to seize’ or loans from Greek (see 3 above), are not included in the counts in Table 3–Table 6. Heavily restored passages have been omitted. The fact that the corpus comes from a limited period and is relatively large, including several longer texts, makes Lycopolitan appealing for the study of Coptic DOM.

Table 3 illustrates the difference between the number of attestations of *n*-marked constructions in imperfective (present and imperfect) and non-imperfective tenses. As noted above, the *n*-marked construction is obligatory when the verb is imperfective (cf. §2.1) with personal pronouns, proper nouns, and grammatically definite nouns.¹² The number of *n*-marked objects vs. the total number of occurrences is given in parentheses.

Table 3: Percentage of marked objects in Lycopolitan in DOM-sensitive contexts (affirmative sentences only)

	Personal pronoun	Proper noun	Poss. det. + NP	Def. art. + NP	Idf. art. + NP
Imperfective	100% (640/642)	- -	97% (63/65)	96% (100/104)	96% (22/23)
Non-imperfective	5% (206/3793)	54% (21/39)	37% (162/442)	36% (321/889)	32% (89/282)

The low figure for *n*-marked non-imperfective pronouns is a result of the preference for direct affixation of the clitic pronoun to the verb. The *n*-marking clearly dominates among proper nouns, whereas the zero-marked construction dominates among markers of definiteness. The proportion of *n*-marked constructions lessens slightly between definite and indefinite articles, but it is unclear whether any significance should be attributed to this. It is questionable whether these categories should even be arranged in a hierarchy.

When the data is broken down into Lycopolitan subdialects (Table 4) substantial differences become apparent, not only between the subdialects themselves, but also between texts and even within texts. For example, only 29% of direct objects in the Manichaean *Kephalaia* (L4) that are preceded by a determiner (indefinite, definite, or possessive) have *n*-marking, whereas 75% are so marked in the *Tripartite Tractate* (L6). One should note that the mean for L9 is negatively influenced by the very low number of *n*-marked objects in non-literary texts.

¹¹Lycopolitan texts make up only a tiny fraction of all existing Coptic texts; only 2.5% according to one estimate (Diebner & Kasser 1989: 59).

¹²The few exceptions include cases such as those mentioned in respect to example (9), involving light verbs, but likely also include simple errors in textual transmission.

Table 4: Frequency of *n*-marked construction with NP determined by (in)definite article or possessive determiner in non-imperfective contexts in Lycopolitan subdialects (affirmative sentences)

	Poss. det. + NP		Def. art. + NP		Idf. art.+ NP		Mean
L4 Homilies	37%	(15/40)	31%	(20/65)	33%	(5/15)	34%
L4 Kephalaia	30%	(32/107)	35%	(110/311)	22%	(25/114)	29%
L4 Psalm-book	41%	(68/166)	31%	(82/264)	30%	(20/66)	34%
L5	29%	(14/49)	39%	(22/56)	52%	(13/25)	40%
L6	65%	(26/40)	67%	(73/109)	74%	(23/31)	69%
L9	18%	(7/38)	18%	(18/98)	10%	(3/29)	15%

The reason for the differences in marking between the various subdialects is currently unclear, but see the discussion in §6 for the possibility of a diachronic explanation.

4 Semantic verb categories and DOM

From the discussion above, it is clear that no single factor determines DOM in Coptic. Despite the general importance of definiteness and topicality in the non-imperfective domain, neither is able to account for the phenomenon, and one is left with a great many *n*-marked direct objects for which an interpretation as a topic seems unwarranted. One way out of this dilemma is to extend the analysis to the immediate environment of the object, to inquire whether there was any lexical preference for one construction or the other, and whether such preferences had any semantic motivation. One should bear in mind that in the event of a disorderly spread of the *n*-marked construction from the imperfective tenses into the non-imperfective tenses, there should be no significant differences in frequency of *n*-marked vs. zero-marked constructions between the various verb types. As will be seen in §5, however, such differences are precisely what are observed in the corpus. The two constructions of the object are unevenly distributed and largely in agreement with the degree of affectedness in correlation to the verb types, which demonstrates that DOM in Coptic cannot be interpreted as a matter of style, as mentioned in §2.2. Similarly, in a discussion on object marking in Hindi and Ostyak, Dalrymple & Nikolaeva (2011: 13) reached the conclusion that the degree of affectedness does not play a role in DOM in those languages because “[o]ptionality is observed with exactly the same subjects and exactly the same verbs.” Nor would one expect there to be lexical restrictions for the use of the marked construction in the optional marking of objects. Note that optionality does not mean free variation, and it is doubtful whether any free variation involving case-marking vs. zero-form really exists (cf. McGregor 2010: 1615). Coptic is an example of what has been termed “semantically enabled optionality” (Kittilä 2005: 505).

The degree to which the semantic relationship between the verb and its arguments can contribute to the understanding of DOM has been shown in several studies of Spanish.

It is generally held that animacy in conjunction with specificity triggers the use of the prepositional accusative *a* before the direct object in standard European Spanish. This explains the different object encoding in Spanish sentences where an animate definite object is preceded by *a* (16a), and an inanimate definite object is not (16b).

- (16) a. *Vi a la mujer.*
 see.PST.1SG ACC DEF.F woman
 ‘I saw the woman.’
- b. *Vi la mesa.*
 see.PST.1SG DEF.F table
 ‘I saw the table.’ (von Heusinger & Kaiser 2003: 41)

This traditional approach does not adequately explain the not-infrequent use of *a* before inanimate objects (cf. von Heusinger & Kaiser 2003: 51). One way to explain such irregularities is to employ a model that takes account of the whole predicate frame, including the relationship between subject and object (Delbecque 2002; García García 2007). Thus, in case of a dynamic verb that is used transitively, one can note a two-sided approach in which the agentive subject is conceived as reacting to the object, not only acting upon it (Delbecque 2002: 103). Marking vs. non-marking constructions represent different event structures. Differences in meaning can be approximated through translation, as illustrated by *abandonar* Ø DO ‘to desert, drop, give up’ vs. *abandonar a* DO ‘to leave behind, abandon’ (Delbecque 2002: 93).

In their now-classic study, Hopper and Hopper & Thompson (1980) described transitivity as a scalar concept consisting of different parameters that can be arranged from high to low. Thus, telic action characterises a transitive clause more than an atelic action does, a volitional agent is more typical for transitivity than a non-volitional one, affirmative sentences are more likely to be transitive than negative sentences, and so forth. Another component in the original model was ‘affectedness of O’, which is characterised as total vs. partial affectedness. The idea of transitivity as a scalar concept was elaborated in a study by Tsunoda (1985), in which he arranged verbs in seven categories, and correlated these with case-frames from many unrelated languages and the degree of affectedness. The hierarchy can be reformulated as a scale: effective action > perception > pursuit > knowledge > feeling > relationship > ability. Verbs of effective action can be further divided into subtypes, depending on whether the verb is resultative (‘to kill’, ‘to break’, ‘to bend’) or non-resultative (‘to hit’, ‘to shoot’, ‘to kick’, ‘to eat’). Perception verbs can likewise be divided into two subtypes, one more attained by verbal action, and the other less attained: ‘to see’, ‘to hear’, and ‘to find’ are considered more attained; ‘to listen’ and ‘to look’ as less attained. The model predicts that any category will be considered for object marking if any higher ranked (to the left in the scale) category is marked for transitivity. It has been said that the hierarchy correlates with both control and affectedness (Testelec 1998). These parameters were further studied by Malchukov (2005), who deconstructed Tsunoda’s original hierarchy in two dimensions. The first (sub-)hierarchy notes decreased patienthood (break > hit > look for > search >

go) and the second (sub-)hierarchy decreasing agenthood (break > see/know > like/fear > freeze/be cold). Such divisions of verb types following semantic principles are of interest for the present paper because they provide points of comparison for testing, to see whether the statistical arrangement in Table 5 can be matched to semantic features.

It is probable that one can correlate DOM with the verb-type hierarchy. Some languages for which affectedness has been claimed as an important factor for DOM are: Abui (Kratochvíl 2014), Ancient Greek (Riaño 2014), Djapu (Næss 2007: 205), Mongolian (Guntsetseg 2008: 64–65), and Spanish (von Heusinger & Kaiser 2003; 2011). The difference between the partitive and the accusative in Finnish has also been explained in terms of partly affected vs. highly affected object (Hopper & Thompson 1980: 262; Næss 2004: 1203; critically Iemmolo 2013: 381). A practical application of verb-type hierarchies in relation to the argument realisation strategies in DOM can be found in a study by von Heusinger & Kaiser (2007), in which the authors were able to show how the frequency of the prepositional accusative increased over time, from Old Spanish up to modern Spanish, based on an analysis of successive translations of the Bible. In that article, only three verbal prototypes were chosen for analysis: (a) to hurt/kill, (b) to see/find, (c) to put/take. The authors found it plausible that the lexical semantics of the verb were a driving force in the diachronic development of Spanish DOM, and they carried the analysis a step further in a subsequent study of twelve verbs, which represented the first five verb types from Tsunoda's verb-type hierarchy (von Heusinger & Kaiser 2011). They discovered that the Spanish data did not entirely agree with the hierarchy, inasmuch as verbs of feeling (*querer* 'to love', *temer* 'to fear'), contrary to expectation, take a more transitive case-frame than verbs of perception, such as *ver* 'to see' or *mirar* 'to look at' (von Heusinger & Kaiser 2011: 612). The competition for agentivity between the participants in the event was mentioned as a possible cause for this (von Heusinger & Kaiser 2011: 613).

In Coptic, the object of perception verbs is typically introduced by a preposition, mostly *a* (Sahidic *e*), which also has a directional meaning 'to'. This explains why verbs of perception are poorly represented in the material analysed in §5.3. However, verbs of feeling are lower ranked than verbs of perception, and take a zero-marked object. This disagrees with Malchukov's two-dimensional model (2005: 81), which predicts that any intermediate verb-type category will display the same case-frame if both higher- and lower-ranked categories do so. Among the verbs of perception are *neu* 'to see' (e.g. 17) and *sôtme* 'to hear'.¹³ There is no TAM-based split for perception verbs, as can be seen in a comparison between (17a), which has a verb in the imperfective tense, and (17b), which has a non-imperfective verb.

- (17) a. *tn-neu ara-k tinou p-makarios*
 1PL-see at-2M.SG now DEF.M-blessed
 'We see you now, o blessed one' (Psalm-book 26, 12)

¹³A thorough study of the valency of this verb is found in Emmel (2006). The occasional alternation between *e* and the usual construction with *n/mma* is different from the *n*-marked vs. zero-marked construction, and is not pertinent to the present study.

- b. *a-u-neu* *a-u-ouaine* *n-brre*
 PST-3PL-see at-INDF-light GEN-new
 ‘They saw a new light’ (Psalm-book 196, 18)

The preposition *a* also occurs before the object with some speech verbs, such as *smou*, ‘to bless’ or *moute* ‘to call’. This correlation of argument realisation and verb type is so strong that it is also used with loan verbs from Greek, such as the mental verb *pisteue* ‘to believe’.¹⁴

- (18) *ari-pisteue* *a-p-ou[aein]*
 do.IMP-believe to-DEF.M-light
 ‘Believe in the light’ (John 12: 36)

The government of perception verbs has historical roots in earlier phases of the Egyptian language. Indeed, the Coptic verbs introducing their object with the preposition *a* originally had diverse object marking strategies. It might be that the semantic development of late hieroglyphic *nw* ‘to look at’ (Depuydt 1988: 6–7), which later became a neutral verb of vision in Lycopolitan *neu* (Sahidic *nau*) ‘to see’, had operated on other perception verbs while retaining its government *r* (older Egyptian) > *a* (Coptic).

5 Analysis

In this section, I will review the ways that verb types relate to DOM in Lycopolitan Coptic. The data, which is drawn from the texts discussed in §3, is presented as a simple frequency list of verbs with *n*-marked and determined NPs, for which see Table 5. Very few proper nouns as objects with non-imperfective forms are attested, so conclusive results can rarely be obtained from them, so proper nouns have been omitted from the analysis and the discussion. For convenience, I use the verb-type hierarchy proposed by Tsunoda (§4). Tsunoda’s division of verbs of effective action into two sub-categories, of resultative and non-resultative action, has also been expanded to include other categories, although for the purposes of this paper I refer mainly to change-of-state verbs. I also use Tsunoda’s classification of verbs as a heuristic tool without any attempt to refine the verb-type hierarchy itself. Of course, it is an oversimplification to make verbs fit into a single category without paying attention to how the presence of other arguments in the sentence can lead to recategorisation.

All the transitive verbs listed in Table 5 are attested at least ten times in affirmative sentences of the Lycopolitan Coptic corpus. I define a verb as transitive (bi- or trivalent) if its object can be coded with the imperfective tenses in at least some contexts through *n*-marking or zero-marking. The table therefore only lists those verbs that participate in the *n/∅* variation. As noted above, verbs of perception code their objects through the preposition *a*, and are therefore omitted. The object NP is always preceded by one of the determiners (definite article, indefinite article, or possessive determiner). The lemmas are listed in the first column in their Lycopolitan form (which differs only slightly from

¹⁴In Greek, the object takes the dative and so cannot be explained as a calque of the source language.

Sahidic). The second column shows the number of the morphological verb class according to a modern standard grammar (Layton 2000: 153–157). Where no number is provided, it means that the verb should be considered irregular. The third column presents a standard translation. The fourth column contains the percentage of *n*-marked constructions out of the total number of occurrences, and the ratio between *n* vs. \emptyset is shown in parentheses. The fifth column provides the subdialect from which the attestations come; the dominance of L4 (Manichaean texts) is evident. The final column lists the subsection in this paper where examples of the verb in question may be found.

Table 5 shows that the range of *n*-marking with determined NPs that take non-imperfective tenses ranges from 0% to 92%, with a median of 36%. Even a quick perusal reveals

Table 5: Distribution of *n*-marking with non-imperfective tenses and determined NPs for most common transitive verbs in Lycopolitan Coptic (affirmative sentence only)

Verb	Class	Translation	Percentage (ratio)	Subdialect	Section
<i>tôhme</i>	1	to call	92% (11/12)	L4	5.1.
<i>hôtbe</i>	1	to kill	91% (10/11)	L4	5.1.
<i>t^hbio</i>	5	to humiliate (subdue)	75% (21/28)	L4, L9	5.1.
<i>kôt</i>	2	to build	70% (7/10)	L4	5.1.
<i>sôtp</i>	1	to choose	67% (6/9)	L4	5.2.
<i>jôk</i>	2	to complete, finish	64% (16/25)	L4, L5, L6, L9	5.1.
<i>pôřš</i>	1	to spread out	60% (6/10)	L4	5.2.
<i>teko</i>	5	to destroy	54% (7/13)	L4, L6	5.1.
<i>jpo</i>	5	to beget	53% (8/15)	L4, L5, L6	5.1.
<i>smine</i>	7	to establish	48% (12/25)	L4, L6, L9	5.1.
<i>tôbh</i>	1	to implore, pray	44% (8/18)	L4, L5, L6	5.2.
<i>ji</i>	-	to take	41% (74/179)	L4, L5, L6, L9	5.2.
<i>teho</i>	5	to reach, set up	36% (8/22)	L4, L6	5.2.
<i>nouje</i>	2	to throw	36% (4/11)	L4, L5, L6	5.2.
<i>tnnau</i>	5	to send	28% (6/21)	L4, L5, L6, L9	5.2.
<i>saune</i>	-	to know	27% (5/21)	L4, L6, L9	5.3.
<i>mour</i>	2	to bind	22% (4/18)	L4, L6	5.2.
<i>eire</i>	-	to do	22% (37/168)	L4, L5, L6, L9	5.2.
<i>ti</i>	-	to give	21% (30/141)	L4, L5, L6, L9	5.2.
<i>cine</i>	7	to find	21% (19/91)	L4, L5, L6, L9	5.3.
<i>shei</i>	-	to write	20% (3/18)	L4, L9	5.1.
<i>teouo</i>	5	to send, produce, utter	20% (11/58)	L4, L5, L6, L9	5.2.
<i>kô</i>	2	to put, leave	17% (12/71)	L4, L5, L6, L9	5.2.
<i>fî</i>	-	to bear, carry	14% (10/69)	L4, L6	5.2.
<i>eine</i>	7	to bring	3% (1/37)	L4, L5, L6, L9	5.2.
<i>řine</i>	7	to seek, ask	0% (0/24)	L4	5.4.
<i>meie</i>	-	to love	0% (0/20)	L4, L5, L6	5.5.

that the distribution of verbs shows agreement with semantically-defined verb types, ordered according to the affectedness hierarchy, especially at the upper and lower ends. There are considerable differences between the individual verbs with some (e.g. *hôtbe* ‘to kill’) predominately having the *n*-marked construction, while others (e.g. *meie* ‘to love’) exclusively take the zero-marked construction. In the imperfective tenses, all the listed verbs must take the *n*-marked construction with determined NPs (see §2.1). Morphology does not trigger the selection of the object construction. Most importantly, it contradicts the idea, first expressed by Steindorff (1894: 165), that the zero-marked construction is typical for the category of the fifth class, which contains etymological causatives. The Lycopolitan data show that verbs belonging to this class are subject to the effect of lexical semantics to the same degree as other verb types.

5.1 Verbs of effective action (resultative)

There is a strong correlation between marking and verbs of effective action. The subject is highly agentive and volitional, exercising full control over the action. The object is fully affected and undergoes a change of state. Among them one finds *hôtbe* ‘to kill’, *jôk* ‘to complete’, and *teko* ‘to destroy’, but verbs of creation are included in this group as well. The median for *n*-marked verbs of effective action is 64%, which means that resultative verbs of effective action are predominantly *n*-marked. A representative example of *n*-marking with a verb of effective action is (19):

- (19) *a-u-hôtbe* *n-n-sabeue*
 PST-3PL-kill ACC-DEF.PL-wise.PL
 ‘They killed the wise men’ (Homilies 80, 30)

It seems significant that the only example of a zero-marked object with *hôtbe* ‘to kill’, which is quoted in (20), has a generic referent. As noted at the end of §2, non-specific objects take the zero-marked construction.

- (20) *n-t-he* *n-hn-rôme* *e-u-na-hatbe-hn-moui*
 ADV-DEF.F-manner GEN-INDF.PL-man CIRC-3PL-FUT-kill-INDF.PL-lion
 ‘in the manner of men who are about to kill lions’ (Psalm-book 205, 30)

At first sight, the verb *tôhme* ‘to call’, which scores highest in selecting the *n*-marking in Table 5, does not seem to be an ideal candidate for demonstrating the relevance of affectedness; under normal circumstances the object of ‘to call’ is not affected by the verb action. However, Manichaean cosmogony provides a likely explanation for this deviance from the expected pattern. The call directed at the various Aeons is a metaphor for them being called into existence as a counter-measure against the approaching advent of Evil. This creational aspect can be highlighted by the translation ‘call forth’ (cf. Kasser 1991).

- (21) *pa-iôt* *p-ouaine* *et-talêl...* *a-f-tôhme* *n-n-aiôn*
 POSS.1SG-father DEF.M-light REL-be.glad PST-3M.SG-call ACC-DEF.PL-aeon
m-p-ouaine... *a-f-tôhme* *n-n-aiôn* *n-t-eirênê...*
 GEN-DEF.F-light PST-3M.SG-call ACC-DEF.PL-aeon GEN-DEF.F-peace

a-f-tôhme *n-n-aiôn* *m-p-scraft...* *se-[h]atp*
 PST-3M.SG-call ACC-DEF.PL-aeon GEN-DEF.M-rest 3PL-be.in.peace.STATE
têr-ou *se-ti-mete*
 all-3PL 3PL-give-satisfaction

‘My father, the glad Light... He called forth the Aeons of the Light into existence... He called forth the Aeons of the Peace... He called forth the Aeons of the Rest... They are all in peace and satisfied’ (Psalm-book 203, 3–23)

Note that the sequence in (21) contains inanimate objects, whereas animates are normally expected with this verb, but it is unclear whether animacy has any significance for the selection of the object construction. This cannot easily be resolved because the boundaries between animate and inanimate were not sharp in the Manichaean universe. One might also wish to consider the topical status of the objects, which is was announced in the title of the psalm: “Concerning the Father and all his Aeons and the Stirring of the Enemy.” The Aeons appear again in the discourse as a plural subject in the last line quoted above.

Related to this are examples of *n*-marking with the verb *t^hbio*, the usual translation of which is ‘to humiliate’, but are better translated in examples such as (22) as ‘to subdue’ (cf. 1a) when followed by an *n*-marked NP, to signal a higher degree of affectedness.

(22) *a-u-t^hbio* *m-p-keke*
 PST-3PL-subdue ACC-DEF.M-darkness
 ‘They have subdued the darkness’ (Kephalaia 35, 5)

This does not prevent zero-marked constructions from appearing with similar meanings (23): one cannot readily identify the two Coptic predicate frames with different verbs in translation, as one might by using Delbecque’s model for Spanish (see §4).

(23) *n-t-he* *je* *a-p-šarp* *n-rôme* *t^hbio-p-keke*
 ADV-DEF.F-way PTCL PST-DEF.M-first GEN-man subdue-DEF.M-darkness
 ‘in the way the first man subdued the darkness’ (Kephalaia 49, 4)

In some cases, such as in (24), not even the combination of a definite reference and an affected object produces *n*-marking. The object *hôb* (lit. ‘thing’), which does not recur in the discourse, can be regarded as synonymous to the head of an indefinite relative clause “that which [lit. the thing] you have given to me to do.” What the work consisted of is not explained. Whether discourse factors play a role is unclear. The object is in this case non-topical.

(24) *a-ei-jak-p-hôb* *abal* *nt-a-k-tee-f* *nêi*
 PST-1SG-finish-DEF.M-thing PTCL REL-PST-2MSG-give-3M.SG to.1SG
a-tr-a-ee-f
 to-CAUS-1SG-do-3M.SG
 ‘I have finished the thing you have given me to do’ (John 17: 4)

Even though the general trend is clear, there are significant differences between the verbs in this group that require explanation. It is difficult to see any reason why *hôtbe* ‘to kill’ and *teko* ‘to destroy’ would take 91% and 54% of *n*-marked objects respectively.

5.2 Verbs of effective action (non-resultative)

Many of the verbs listed in Table 5 are action verbs where the actor retains control of the action expressed by the verb. The object is little affected, but may undergo limited physical movement (e.g. ‘to spread out’, ‘to take’, ‘to throw’, ‘to set up’, ‘to bring’). The median percentage of *n*-marking in this group is 25%, so *n*-marking is clearly the exception. This group could be further divided into subcategories on semantic grounds, but this would obscure the relevant point, which is the overall dependency of object marking on the affectedness hierarchy.

It can be difficult to identify where the difference between the *n*-marked construction vs. the zero-marked construction lies. These difficulties are illustrated in (25a–25b).

- (25) a. *a-f-nouje* *n-hn-jôr[me]* *ha* *te-f-staurôsis*
 PST-3M.SG-throw ACC-INDF.PL-allusion concerning POSS.3M.SG-crucifixion
 ‘He made allusions to his crucifixion’ (Homilies 44, 17)
- b. *a-u-nouj-ou-halu[sis]* *a-pe-f-mout*
 PST-3PL-throw-INDF-chain to-POSS.3M.SG-neck
 ‘They put a chain around his neck’ (Homilies 48, 21)

Both examples are from the same text, which tells how Mani, the founder of the religion named after him, suffered martyrdom in AD 277. In the first example (25a), the *n*-marked object (‘allusions’) is inanimate and indefinite, and does not seem to be more affected than the object in (25b). Pragmatic factors may be relevant, because the ‘allusions’ in (25a) may be a reference to Mani’s comments on his martyrdom in the following line. The marking would then indicate that the indefinite noun ‘allusions’ should be regarded as specific, serving as a referential anchor (cf. von Heusinger 2002). In (25b), on the other hand, the ‘chain’ does not appear again in the following discourse. To understand the importance of extent discourse-informational factors for *n/∅* variation, one would need to explore discourse persistence in a systematic fashion, which would require time-consuming manual processing. Due to the non-narrative character of most texts in the corpus, there is little referential persistence with regard to the direct object, so that referential tracking becomes difficult.

Within this group are a few verbs for which the subject exercises full control over the action, and that have a non-affected object, such as *sôtp* ‘to choose’, *tôbh* ‘to implore’, and *teouo* ‘to utter’. In this context, the verb *tôbh* ‘to implore’ has different case-frames depending on the animacy of the object. On the one hand, when the object is inanimate, such as in (26), *n*-marking is clearly preferred. On the other hand, zero-marking is used with animate objects, as in (27), in a way that is reminiscent of other speech verbs (cf. *teouo* ‘to utter’ and *šine* ‘to ask’).

- (26) *e-u-a-tôbh* *m-p-kô* *abal* *n-n[ou-nabe]* *n-tot-f*
 FUT-3PL-FUT-ask ACC-DEF.M-give away GEN-POSS.3PL-sin from-hand-3M.SG
m-p-noute
 GEN-DEF.M-god

‘They will ask for the forgiveness of their sins from God’ (Homilies 23, 8)

- (27) *a-k-tabh-pek-iôt*
 PST-2MSG-ask-POSS.2MSG-father

‘You have asked your father’ (Psalm-book 44, 11)

It is also worth mentioning the verb *eire* ‘to do’. It frequently occurs as a light verb in a few common expressions, such as *r-p-meue* ‘to remember’ (lit. ‘to do the remembrance’), where the incorporation of the object underlines its low referential status (see 9). The compound is understood synchronically as a verb, and can even be followed by an *n*-marked object, as in (28).

- (28) *e-s-na-r-p-meue* *mma-ou* *nci-ti-ekklêsia*
 FOC-3F.SG-FUT-do-DEF.M-memory ACC-3PL AGT DEF.F-church

‘the Church will remember them’ (Tripartite Tractate 135, 25)

The presence of an object changes the telicity of the verb, which is another factor for high transitivity according to Hopper & Thompson (1980). One may contrast examples with a nuance ‘to do s.o.’s wish’, i.e. to fulfill it (29), against other examples where the activity is unbounded, as is the case of ‘spending (lit. doing) time’ (30).

- (29) *hn* *ou-špnšôpe* *mn-ou-[c]lam* *ša-u-eire* *m-p-ôk*
 in INDF-sudden and-INDF-rapid AOR-3PL-do ACC-DEF.M-delight
n-hêt *m-pou-jais*
 GEN-heart GEN-POSS.3PL-lord

‘Suddenly and rapidly they fulfill the desire of their lord’ (Kephalaia 51, 16–17)

- (30) *alla* *a-u-r-pou-kairos* *têr-f* *e-u-šôpe* *hn-⟨ou-thli⟩psis*
 but PST-3PL-do-POSS.3PL-time all-3M.SG CIRC-3PL-become in-INDF-distress

‘But they spent all their time falling in distress’ (Kephalaia 150, 29)

Although the general trend between resultative and non-resultative action seems clear, there are considerable differences between the Lycopolitan subdialects regarding the frequency of the *n*-marked construction, as seen for a selection of verbs in Table 6.

This reveals very different proportions of *n*-marking in the various subdialects of Lycopolitan Coptic. It is notable that *n*-marking is virtually non-existent in L9, especially in non-literary texts. It is difficult to tell what this signifies. There are also remarkably low *n*-marking percentages for several verbs in L4. In this subdialect, zero-marking appears to constitute the normal transitive construction for verbs of non-resultative action. It seems as if *n*-marking is more common in L5, but the totals are rather low for that subdialect. By contrast, the percentage of *n*-marking is high in L6, with no real distinction

Table 6: Subdialectal variation in *n*-marking for a selection of verbs

	L4	L5	L6	L9
<i>ji</i> ‘take’	30% (29/98)	72% (13/18)	88% (29/33)	10% (3/29)
<i>eire</i> ‘do’	23% (26/115)	50% (4/8)	25% (6/24)	5% (1/18)
<i>ti</i> ‘give’	10% (9/92)	50% (2/4)	82% (18/22)	5% (1/21)
<i>kô</i> ‘put’	6% (3/53)	44% (4/9)	83% (5/6)	0% (0/3)
<i>fi</i> ‘carry’	7% (3/46)	10% (1/10)	86% (6/7)	0% (0/5)

in treatment between resultative (as in §5.1) and non-resultative action verbs. Thus, *n*-marking is clearly the norm in the L6 dataset, the only clear deviation from the trend being *eire* ‘to do’, partly due to its frequent use as a light verb. If one omits objects as complements in complex predicates, which are zero-marked (as in 28), one still does not arrive at more than 46% *n*-marking with *eire*.

5.3 Verbs of perception/cognition

As stated above (end of §4), the object of perception verbs is mostly introduced by the preposition *a*. This explains why Table 5 only lists two examples of perception verbs participating in the *n*/ \emptyset variation (*saune* ‘to know’, *cine* ‘to find’). The agent exerts no control on the action and the object is unaffected.

The behaviour of *saune*, which has 27% *n*-marking, is unique to Lycopolitan: I do not know any examples of a *n*-marked object together with this verb in any dialect other than Lycopolitan. In the imperfective (31) the stem is *saune* (Sahidic *sooun*):

- (31) [e]peidê *f-saune* *n-t-gnôsis*
 since 3M.SG-know ACC-DEF.F-gnosis
 ‘Since he knows the gnosis’ (Kephalaia 233, 26)

The verb *saune* is evidently a secondary form, having developed out of a verb form often called the stative, which expresses a resultative state (Peust 2013: 163). The morphology of this verb is quite complex and presents many variants (overview in Vycichl 1983: 202). The verb *saune* itself, like similar verbs expressing knowledge in earlier Egyptian dialects, was originally an inchoative mental verb, not a verb of state, that had the basic meaning ‘get to know’. It is only through the spread of the stative form that the verb evolved into a verb of state, similar to one meaning of the English ‘to know’. In dialects other than Lycopolitan, *saune* (and predictable variants thereof) is used indiscriminately with imperfective and non-imperfective tenses. With non-imperfective TAM forms, NPs as direct objects are almost invariably zero-marked (and thus different from Lycopolitan). Originally, the stem may have been *souôn/snouôn*, and it appears as such in Lycopolitan with non-imperfective tenses, with either *n*-marking (32) or zero-marking (33).¹⁵ In other dialects, this allomorph is used with zero-marking.

¹⁵*Saune* is also possible with a non-imperfective, when there is no object.

- (32) *a-i-snouôn n-ta-psuchê*
 PST-1SG-know ACC-POSS.1SG-soul
 ‘I have known my soul’ (Psalm-book 56, 26)

- (33) *tote e-u-šan-souôn-p-iôt*
 then COND-3PL-COND-know-DEF.M-father
 ‘Then if they know the father’ (Gospel of Truth 24, 31)

A comparatively high percentage (21%) of *n*-marked objects are found with *cine* ‘to find’. In Tsunoda’s original model, the verb ‘to find’ was listed among perception verbs based on the argument realisation of ‘to find’ in, for example, North Caucasian languages (cf. Ganenkov 2006), though ‘to find’ can also be a verb of perception in English (Simon-Vandenberg 1999: 423). It is not easy to see which semantic reason could favour either one object marking strategy over another for this verb. Compare the following, where the objects are near synonyms expanded through a genitive adjunct, and both times have a verb in the past tense.

- (34) a. [...] *a-f-cine n-t-šbiô m-pf-his[e]*
 PST-3M.SG-find ACC-DEF.F-requital GEN-POSS.3M.SG-toil
 ‘... he has found the requital for his toil’ (Homilies 83, 19)
- b. *je a-i-cn-p-beke m-pa-hise*
 for PST-I-find-DEF.M-reward GEN-POSS.1SG-toil
 ‘for I have found the reward of my toil’ (Psalm-book 93, 30)

The fragmentary context of (34a) makes it impossible to observe anaphoric behaviour. The selection seems to be truly optional.

Four instances where the object of *cine* is *n*-marked can be interpreted as being topical. This interpretation follows from the repetition of the object each time in short, explanatory nominal sentences.

- (35) *a-i-cine n-t-mrô t-mrô te t-entolê...*
 PST-1SG-find ACC-DEF.F-harbour DEF.F-harbour COP DEF.F-command
a-i-cine n-n-ejêu n-ejêu ne p-rê
 PST-1SG-find ACC-DEF.PL-ship DEF.PL-ship COP.PL DEF.M-SUN
mn-p-oooh a-i-cine n-ou-hêu e-mn-ase [nhêt-f]
 and-DEF.M-moon PST-1SG-find ACC-INDF-gain CIRC-NEG-loss in-3M.SG
 ‘I found the harbour. The harbour is the Commandment... I found the ships. The ships are the sun and the moon... I found a gain wherein there is no loss...’
 (Psalm-book 168, 1–9)

There is a further consideration, because the second consonant in *cine* is identical to the object marker *n*, and this could play a role for the common use of zero-marking. It is true that phonology can sometimes override semantic-pragmatic parameters, as happens sometimes with the Spanish *a* (Kliffer 1995: 108), in order to promote the zero-marked

form. But the percentage of attestations for the *n*-marked construction differs between *cine* (21%) and *šine* (0%), which has the same rhyming pattern, so the idea of phonological influence is unlikely.

5.4 Verbs of pursuit

In this category the subject has a low degree of control and the object is unaffected. The list comprises a single verb of pursuit, *šine* ‘to ask’, which here is zero-marked (36). In other dialects (Akhmimic, Mesokemic), where the percentage of *n*-marking is higher, the object of this verb can be *n*-marked.

- (36) *a-ke-mathêtês* *šn-p-apostolos*
 PST-other-disciple ask-DEF.M-apostle
 ‘Another disciple asked the apostle’ (Kephalaia 208, 15)

5.5 Verbs of feeling

Here the subject lacks control, the object is not affected, and the verb expresses a state. The verb *meie* (Sahidic *me*) ‘to love’ is incompatible with *n*-marking in the non-imperfective tenses, a feature that appears to be shared by all Coptic dialects.¹⁶ See (4) and (8) for examples with the imperfective. Its antonym *maste* ‘to hate’, not included in the list above, also avoids *n*-marking in the non-imperfective.

- (37) *a-u-mrre-p-eau* *gar n-n-rôme*
 PST-3PL-love-DEF.M-glory for GEN-DEF.PL-man
 ‘for they loved the glory of men’ (John 12: 43)

In this context, it is appropriate to consider *ouôš* ‘to want’, ‘to wish’. As mentioned at the end of §2.1, this verb is the sole exception to the rule that definite objects must be *n*-marked with the imperfective tenses. A problem for the historical explanation referred to earlier is that the difference between *wḥ3 n O* ‘to look for’ and *wḥ3 O* ‘to wish’ is found only in Demotic (Depuydt 1993), meaning that it had disappeared before the spread of *n*-marking into the non-imperfective. Once the former expression had disappeared, it would have been possible for *ouôš* to have taken part in the expansion of object marking. A semantic analysis based on affectedness offers an alternative, functional explanation, which holds true synchronically. Thus, semantics may have blocked *ouôš* from acquiring object marking in the non-imperfective, and it may have had a similar effect on the imperfective.

¹⁶I know of only one possible example of this verb with a marked direct object: *p-e-ša-u-ka-ou-koui de na-f ebol e-ša-f-me n-ou-koui* ‘The one to whom little is forgiven, he loves only a little’ (Sahidic Luke 7: 57), in which the object is focalised by means of the preposition. It therefore does not seem to be an example of a differential context.

6 Discussion

The foregoing section lends support to the idea that Coptic DOM can be successfully analysed, based upon a view of transitivity as a scalar concept involving several semantic features (Hopper & Thompson 1980). In Coptic, definiteness, specificity, topicality, and affectedness seem to act together to create a high degree of transitivity, and interact in triggering *n*-marking. How the various factors contributing to DOM in Coptic relate to each other is open to question. The study of the development of DOM in Coptic is still in its formative stages, and the following remarks are therefore preliminary, and have no immediate bearing on Coptic dialects other than Lycopolitan.

Definiteness is a factor for object marking with all TAM forms, although in the non-imperfective tenses it leads only to optional DOM (cf. §4). I posit that marking spread across definite NPs more-or-less simultaneously, and not stepwise from one definite category to the next, because the difference in percentages of *n*-marked nouns seems negligible when compared to determined NPs (see Table 3). This last fact speaks against a spread along the definiteness hierarchy scale as claimed, *inter alia*, for the Spanish prepositional accusative (Aissen 2003). The topical status of the marked objects may have been a secondary development, which followed from semantic definiteness. A topical function is best visible in the phonologically heavier form *mma*, which was used for pronouns (see 14) that are semantically definite. The *n*-marked object would receive separate stress from the verb, and thus in an iconic way reflect the saliency of the object. If so, *n*-marking might be described as a topicalisation strategy through right-dislocation, even though the right periphery is not recognised as a position for topics in Coptic. It is, however, difficult to identify topicality in NPs as objects by studying referential coherence, because the non-narrative character of most Lycopolitan texts is such that objects, once mentioned, do not commonly persist over several sentences, and their behaviour cannot be observed. Substitution or question tests for topicality are difficult to apply without a native speaker's intuition. It can be expected that the effect of topicality for overruling the expected selection of *n* vs. \emptyset would be greatest for non-effective action verbs (see §5.2), because this is the only group in which one notes significant differences between the subdialects (see Table 6). These differences, ultimately affecting the percentage and their placement in the list in Table 5, indicate that not all factors operated in an identical manner in all subdialects.

The frequency list of Lycopolitan transitive verbs and their construction with non-imperfective tenses, in Table 5, shows that object marking was generally in agreement with Tsunoda's affectedness hierarchy, particularly at the upper and lower ends. Over 90% of examples of a typical action verb with an affected object (§5.1), such as 'to kill', take *n*-marked objects, while a typical verb of feeling (§5.5), 'to love', takes 0%. The more the object is affected, the more likely it is to receive *n*-marking. It is more difficult to assess the large group of non-effective action verbs (§5.2).

The correlation between marking, which is an innovation of Egyptian-Coptic language history, and the affectedness hierarchy with the non-imperfective, must reflect synchronic priorities. It is conceivable, a priori, that the marking spread randomly from

the imperfective to the non-imperfective without any functional basis. However, the difference in marking frequency by verb type suggests that this was not the case. If it was, one would be at a loss to explain why some verbs do not have the marker with the non-imperfective tenses, but uniformly do with the imperfective ones. Note that my interpretation of Lycopolitan DOM is a counter-example against the generalisation that asymmetric DOM systems are not regulated by affectedness (Iemmolo 2013). The TAM-based split that has differing rules for the imperfective and non-imperfective tenses under similar syntactic conditions (obligatory vs. pragmatic-semantically determined DOM) already speaks against the general validity of this hypothesis.

At first glance, there seems to be no particular information-structural reason why the Manichaean texts (L4) should have far fewer *n*-marked direct objects than the Gnostic texts (L6). The difference between L4 and L6 is significant, as indicated by a chi-square test with Yates' correction that yields a statistical significance at $p < 0.001$. Since the *n*-marked construction was an innovation, one may feel inclined to assume that the difference between the percentages in L4 and L6 would reflect an ongoing spread of the marker into the non-imperfective tenses. This would, in principle, mean that texts with a low incidence of the *n*-marked construction are from an older stage of language development, and texts with a high incidence of the *n*-marked construction are from a more recent stage. It is plausible to conceive that the use of *n* as a topic-marker was extended to non-topical contexts, so that more and more determined and specific expressions would ultimately receive the marker within the non-imperfective domain (cf. Dalrymple & Nikolaeva 2011: 208). Affectedness may have been the path along which the construction spread. It might be argued, on the basis of the more frequent use of *n*-marking in L6, that the role of affectedness was then gradually diminished as definiteness alone, irrespective of any eventual topical role of the object, would often trigger marking. This seems to move towards a clearer separation of a group of verbs (action verbs) that favoured *n*-marking from verbs of feeling that favoured zero-marking, indicating a lexically-based selection of object construction (cf. Iemmolo 2013: 390).

It is difficult to offer support for such an assumed diachronic scenario, or to refute it through independent criteria, since the dating of manuscripts, let alone of the texts themselves, is very insecure. But diachronic studies on DOM in Spanish show a similar span in object marking as that observed between the Lycopolitan subdialects, and these appear to have evolved over two centuries. Thus, in *El Cantar de mio Cid* from the 13th century, only 36% of animate direct objects are overtly marked (data from Brenda Laca, quoted in von Heusinger & Kaiser 2011: 602, yet two centuries later objects are marked under identical conditions at 70%–90% (von Heusinger & Kaiser 2011: 610). Conversely, such variation does not need to be understood as a reflex of language diachrony. This can be seen in Old Japanese, where NPs from contemporary prose texts of 10th century are marked at 44%–72% (Sadler 2002: 248). Data from Portuguese also show that there can be substantial quantitative differences between contemporary texts (Delille 1970: 85, 119–120). Furthermore, the letters from L9, in which object marking is sparingly attested, are originals and can be securely dated to the latter half of the 4th century AD. This makes them, for all practical purposes, contemporary with the text copies of L6, in which

n-marking is the dominant pattern. Thus, variation in object marking was acceptable concurrently. Such cases are a reminder that differences between subdialects should not necessarily be interpreted as a reflex of diachronic development. Despite this, the blurry picture of Coptic DOM is likely to reflect an evolving DOM system.

It is worth reasserting the lack of any role for animacy in Coptic DOM, to judge from the Lycopolitan corpus used in this paper. It is not possible to find any parallel alignment between verb hierarchy and animacy that is in a way similar to what von Heusinger & Kaiser (2007) suggested in their analysis of Spanish. They observed a decrease in object marking from the verbs ‘to kill’, ‘to see’, ‘to consider’, and ‘to have’, which were analysed as representatives of different verb classes. Their conclusion that “the particular ranking depends on the animacy requirement imposed by the verb on the direct object” (von Heusinger & Kaiser 2011: 605) is not cogent because it was based on a study of no more than four to six verbs. Searching the animate vs. inanimate objects listed in this database reveals no such animacy ranking. Rather, the Coptic data indicate that the affectedness scale is parallel to the decrease of control by the actor on the process of the verb. Furthermore, Coptic DOM calls into question the general validity of any theory that relies on the need for disambiguation, on syntactic or semantic grounds, between the agent and object as a motivation for DOM (e.g. Aissen 2003; de Swart 2005; Primus 2012). The word order SVO means that there was no need for disambiguation of the core participants.

7 Conclusion

The present study supports the claim that Coptic DOM in the non-imperfective domain has a functional motivation and is not arbitrary. I do not claim to have formulated a set of inviolable rules. Instead, I have shown tendencies that seem to be shared by all Lycopolitan subdialects (except for L9), for which the *n*-marking number is too low to permit any satisfactory conclusions. The clear differences in *n*-marking percentages between the Lycopolitan subdialects does, however, confirm their relative independence. It is apparent from the analysis that semantic factors act in conjunction with discourse-structural factors in Lycopolitan Coptic. The quantitative analysis in §5, on the alternation of marking of NPs as objects through *n*/∅ with non-imperfective tenses, has revealed striking differences in marking between the semantic verb categories. There is an overall agreement with Tsunoda’s verb-type hierarchy: a highly-affected object with a dynamic action verb (e.g. *hôtbe* ‘to kill’) is likely to receive *n*-marking; a little-affected object is less likely to receive *n*-marking (e.g. *nouje* ‘to throw’). A low *n*-marking percentage is found for the few verbs of perception/cognition that take the *n*/∅ variation (*saune* ‘to (get to) know’, *cine* ‘to find’). Verbs of feeling (e.g. *meie* ‘to love’) uniformly have a zero-marked construction.

Although generalised findings from an analysis of Lycopolitan cannot be extended to Coptic as a whole, it should be apparent that it is relevant to examine the semantics of verb types is a relevant subject in future studies of DOM in that language.

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Abbreviations

ABST	Abstract noun formative	FUT	Future
ACC	Object marker	GEN	Genitive
ADV	Adverb	IMP	Imperative
AGT	Agent preposition	IMPF	Imperfect
AOR	Aorist	INDF	Indefinite
CAUS	Causative	M	Masculine
CIRC	Circumstantial clause marker	NEG	Negative
COND	Conditional	PL	Plural
COP	Copula	POSS	Possessive article/pronoun
DEF	Definite article	PREP	Preposition
DEM	Demonstrative pronoun	PST	Past
F	Feminine	PTCL	Particle
FOC	Focalizer	REL	Relative
		STATE	Resultative state

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