1. Introduction

In this paper, I discuss a nominal construction of Greek, known as polydefinites (Kolliakou, 2004). Polydefinites are nominals with multiple instances of the definite determiner followed by a bare adjective:

(1) To KSILINO to molivi (oxi to metalliko)
    The.n wooden.n the.n pencil.n not the.n metallic.n
    ‘The WOODEN pencil (not the metallic one)’
    Or ‘The pencil the WOODEN one (not the metallic one)’

These constructions are additional to nominals with a single determiner, the monadic definites (term by Kolliakou, 2004). Thus, the monadic counterpart of (1) would be (2):

(2) To KSILINO molivi (oxi to metalliko)
    The.n wooden.n pencil.n not the.n metallic.n
    ‘The WOODEN pencil (not the metallic one)’

My purpose is to determine the source that makes polydefinite constructions possible, and determine what polydefinites reveal about language. I propose that polydefinites exemplify a type of restrictive modification by nominals, in short, RMN. The core proposal of this work is that RMN, and in effect polydefinites, are licensed by definiteness itself, i.e. by the definite determiner. Previous analyses (Lekakou & Szendrői, 2007, 2008, 2010) have directly relate polydefinites to rich inflection. However, evidence from English shows that inflection does not play the decisive role attributed to it. Instead, I argue that it is the semantic specification of the definite determiner and its mapping onto the syntax that license polydefinites, and more generally, RMN. Taking definiteness to consist of two components, familiarity (Heim, 1982) and uniqueness (Heim & Kratzer, 1998), I propose that determiners spelling out one aspect, familiarity, are underspecified for definiteness. Underspecified Fam heads project a predicative FamP. Determiners spelling out both familiarity and uniqueness are fully specified in terms of definiteness and thus project fully definite phrases, DefPs.

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Furthermore, restrictive modifying nominals are argued to be predicates, whether they are fully definite or not. Like relative clauses and adjective phrases, they are restrictive nominal modifiers, and as such, they should be treated as predicates, which can compose with the predicative noun.

In the proposed analysis then, restrictive modifying nominals compose with matrix FamPs via the Predicate Modification rule (see Heim & Kratzer, 1998 for more on this rule). However, restrictive modifying nominals may not intersect with DefPs. As opposed to FamPs, DefPs are arguments and thus may not compose with the predicative modifying nominals. This analysis predicts that determiners that are underspecified for definiteness should allow RMN, while fully definite determiners should block it. In the languages examined here, this prediction is born out. It is concluded that RMN is licensed by the syntactic partition of definiteness, and in particular by the syntactic mapping of familiarity onto a single projection.

Accordingly, this paper is organized as follows: section (2) discusses the data and previous analyses. Section (3) presents the syntactico-semantic proposal. It starts by examining the Greek definite determiner and then compares it to English definite determiners, which provide further evidence for the proposed analysis. Section (3) also examines the modifier in both languages and offers the basis for its syntactico-semantic properties. Section (4) concludes with new and interesting insights about polydefinites but also RMN, in general.

2. The Greek noun and previous analyses

Typically, the Greek noun is always preceded by a determiner, even proper names (cf. 3a, b) and generics (cf. 3c, d):
(3)  

a.  
\[
I \text{ Melina anikse to xondhro} \\
\text{The.f.nom Melina.f opened the.m thick.m fakelo.} \\
\text{envelope.m} \\
\text{‘Melina immediately opened the thick envelope.’}
\]

b.  
\*Melina anikse xondhro fakelo.  
\text{Melina.f opened thick.m envelope.m}  
\text{‘Melina immediately opened the thick envelope.’}  
\text{(no articles)}

c.  
\[
O \text{ kozmos aghapaj ta} \\
\text{The.m.nom people.m.nom(mass) love.3s the.n.pl taksidhja.} \\
\text{trip.n.pl} \\
\text{‘People love travelling.’}
\]

d.  
\*Kozmos aghapaj taksidhja.  
\text{People.m.nom(mass) love.3s trip.n.pl}  
\text{‘People love travelling.’}  
\text{(Bare generic subjects & objects)}

If an adjective is present in the definite DP, it may only appear in a prenominal position (cf. 4a). Otherwise, ungrammaticality results (cf. 4b):

(4)  

a.  
\[
I \text{ Melina anikse to xondhro} \\
\text{The.f.nom Melina.f opened the.m thick.m fakelo.} \\
\text{envelope.m} \\
\text{‘Melina immediately opened the thick envelope.’}  
\text{(Def.Art-Adj-N)}
\]

b.  
\*I \text{ Melina anikse to fakelo}  
\text{The.f.nom Melina.f opened the.m envelope.m}  
\text{xondhro. thick.m}  
\text{‘Melina immediately opened the thick envelope.’}  
\text{(Def.Art-N-Adj)}

Hence, in monadic nominals, the adjective is always prenominal. In contrast, the polydefinite adjective, i.e. the adjective preceded by its own determiner, shows a distinct flexibility in the word-order. It can either precede or follow the noun, but also there can be more than one polydefinite adjective. In this case the polydefinite adjectives can appear in various positions. As shown in (5), six possible word-orders are possible:

(5)  

a.  
\[
I \text{ asimeɲa i xiropijti i pena} \\
\text{the silver the handmade the pen}
\]

b.  
\[
I \text{ xiropijti i asimeɲa i pena} \\
\text{the handmade the silver the pen}
\]

c.  
\[
I \text{ asimeɲa i pena i xiropijti} \\
\text{the handmade the pen the handmade}
\]

d.  
\[
I \text{ xiropijti i pena i asimeɲa} \\
\text{the handmade the pen the silver}
\]

e.  
\[
I \text{ pena i xiropijti i asimeɲa} \\
\text{the pen the handmade the silver}
\]

f.  
\[
I \text{ pena i asimeɲa i xiropijti} \\
\text{the pen the silver the handmade}
\]
To account for the properties of polydefinites, previous analyses have argued that the definite determiner and the bare (polydefinite) adjective form a restrictive DP (Kolliakou 2004, and later Lekakou & Szendrői 2007, 2008, 2010).

Lekakou & Szendrői (2007, 2008, 2010) further argue that this restrictive DP constitutes a case of close apposition. They argue for a process of identification of Referential roles, as in Williams (1981, 1989), which takes place under sisterhood. The result is interpreted as an intersective set:

\[
\text{DP}_1, 2 [R_1 = R_2]
\]

As shown in (6), DP\(_{1,2}\) refers to an entity that belongs to the intersection of the two sets designated by the smaller DP subparts which are taken to be structurally identical. Lekakou & Szendrői further claim that the definite determiner does not make a semantic contribution, but is only inserted to spell out morphological case. For them, polydefinites are the result of rich inflection, predicting that only languages with rich inflection allow them.

In Kyriakaki (2010), I argue that modifying DPs can also be non-restrictive. Arguing that restrictive and non-restrictive modifying DPs are derived by distinct structures, this analysis focuses on restrictive DPs and argues for an asymmetrical relation between the modifier and the modified noun. Data like in (7) below provide support for this claim. As can be observed here, the nominalized adjective of the restrictive DP to thilastiko ‘the mammal’ is neuter. The predicative adjective terastios ‘huge’ though agrees with the noun falena ‘whale’ which is feminine, but not with the modifying DP to thilastiko ‘the mammal’ of neuter gender:

\[
\begin{align*}
\text{a. I falena to thilastiko ine terastia/} & \quad *\text{terastio.} \\
\text{The.f whale.f the.n mammal.n be.3s huge.f/} & \quad \text{huge.n} \\
\text{‘The mammal whale is huge.’}
\end{align*}
\]

\[
\begin{align*}
\text{b. To thilastiko i falena ine terastia/} & \quad *\text{terastio.} \\
\text{The.n mammal.n the.f whale.f be.3s huge.f/} & \quad \text{huge.n} \\
\text{‘The mammal whale is huge.’}
\end{align*}
\]

This asymmetrical relation can only be captured under a corresponding an asymmetrical structure. In Kyriakaki (2010) the restrictive modifying DP is an adjunct to nP, while the noun is in NP. Based on data from genitives, the noun is argued to raise to NumP, which gives rise to the polydefinite with the postnominal restrictive modifier. Hence, the asymmetrical relation between the noun thus and the modifier arises. For the prenominal restrictive word-order, the restrictive DP is argued to move to a Focus phrase, since the restrictive DP is always focused. The structure proposed in Kyriakaki (2010) is given in (8):
Other types of definite DPs are also argued to function alike. These are proper names, count nouns and DemP and can modify the noun restrictively:

(9) a. I fili mu / Stella (oxi
The.f.nom friend.f |cl.gen the.f.nom Stella (not
i i Anna)
the.f.nom Anna)  
‘My friend Stella (not Anna)’

b. I fili mu / jatros (oxi
The.f.nom friend.f my the.f.nom doctor (not
i i signafeas
the.f.nom writer.nom)
‘My friend the doctor (not the writer)’

b. Xriazome AFTON ton odhigo, oxi
Need.1 this.m.acc the.m.acc guide.m, not ekino.
that.m.acc  
‘I need THIS guide, not that one.’

These are treated under the same unified account, i.e. as adjuncts to nP, which may raise to FocP when they are focused.

Here, we adopt the asymmetrical structure in (8). Restrictive modifying nominals are similar to restrictive relative clauses, as well as other restrictive modifiers, and as such, they must adjoin lower, i.e. to nP (for more on restrictive modifiers, as well as why they must adjoin low, see Kratzer 1998).

So far though, the question of what licenses polydefinites remains. I now look at the definite article and examine its role to polydefinites. Since adjectives
are prenominal unless they are preceded by a definite article, this suggests that the definite article may play a decisive role in polydefinites.

3. Definiteness

In this section, I propose that the source of polydefinites is definiteness itself. Briefly, I take definiteness to consist of two ingredients, familiarity (Heim, 1982) and uniqueness (Heim & Kratzer, 1998). I argue that the Greek definite determiner spells out only familiarity (Fam). Thus, it is not an expletive, but it is not a full D, either. It projects a predicative phrase, FamP, which may intersect with the predicative polydefinite modifier. Thus, polydefinites are not the result of rich inflection, but rather the result of the syntactic mapping of the two components into two syntactic projections: iota phrase and familiarity phrase. Determiners that allow restrictive modifying nominals are predicative FamPs and may intersect with the predicative restrictive modifying nominal. Determiners disallowing restrictive modifying nominals are full definite phrases, i.e. arguments. As such, they may not intersect with a restrictive modifier. Before we see this in detail, let us first consider the case of English.

3.1 English definite nominals

Standard English (SE) nominals headed by the ban restrictive nominals of the sort discussed here:

(10) a. * The doctor the genius
    b. * The woman the doctor (not the manager)

Other types of definite nominals though, such as pronominal possessive DPs and proper DPs, easily allow them:

(11) a. My friend the painter (not the writer)/ Larry (not Ed)
    b. John my brother (not my friend)

In (11a) the pronominal possessive can be modified restrictively, either by a definite nominal, the painter, or by a proper name, Larry. In (11b) too, the proper name John can be restricted by the possessive modifier my brother. In both cases, we have complete absence of inflectional morphology. Still, restrictive modification by nominals is possible. Hence, inflection should not be the source for restrictive modification by nominals. Rather, it must be the head of these nominals that licenses it and thus get a type of modification that resembles Greek polydefinites.

Interestingly, data from other English dialects, such as Scottish English show that the determiner the in this dialect has the same properties as the Greek definite article. In (12a) for instance, the friend can be modified by the modifier the footballer. Similar facts hold for (12b).

(12) a. I saw the friend the footballer, not the engineer.
    b. I met with the professor the tall one, not the short one.
Here too, the definite determiner of Scottish English shows no inflection but, like the Greek determiner, it allows restrictive modification by nominals. Consequently, we can conclude that inflection is not the source of polydefinites. Rather, it must be the semantic contribution of the definite article.

3.2 A closer look at the properties of DETs

I now examine the main properties of the English and Greek definite determiners. I argue that there are two types of definite determiners, fully definite determiners and underspecified definite determiners. Underspecified determiners may allow RMN, while fully specified determiners block it. I further determine the type of this semantic underspecification, and propose that underspecified determiners only spell out familiarity. Fully specified determiners additionally spell out uniqueness.

Let us consider the examples in (13) by Massam and Ghomeshi (2009):

(13) a. [John] offered me some coffee.
    b. [John the assistant] offered me some coffee.

In (13a) a unique contextually salient entity is determined, John. In (13b) we have a set of contextually salient entities named John. That is, a set of alternatives seems to be introduced, i.e. John the assistant, John the accountant, etc. Determiners that allow RMN, such as English null and possessive D, Scottish the and the Greek definite article, do not seem to determine a unique entity. Rather, they only give us the set of the contextually salient individuals. Therefore, such determiners should spell out familiarity but are otherwise underspecified for uniqueness.

In contrast, the SE determiner the always determines a unique familiar entity from a set, i.e. it spells out both familiarity and uniqueness. Since it is fully specified, the phrase projected must be an argument which may not intersect with a predicative modifier.

Therefore, we need an analysis that makes a syntactico-semantic distinction between definite determiners, and in particular, between underspecified and fully definite determiners. A structure like in (14) could account for fully definite determiners, since the phrase projected is an argument:

(14) 

For underspecified determiners though, a distinct structure is in order. This structure must reflect the underspecification discussed here, and show how RMN is made possible.

Before we proceed to the proposed structure, let us take a closer look at Greek and English definite determiners. In Greek, we have seen that the definite determiner must accompany proper names, it allows restrictive nominals, but it also appears in possessive nominals, which allow polydefinites:
To stilo mu to ble (oxi to prasino)
the.n pen.n my.cl.gen the.n blue not the.n green.n
‘My blue pen (not my green one)’

We have also seen that the Greek determiner appears in generic plurals. Unlike bare plurals though, definite generics cannot be interpreted existentially:

O kozmos aghapaj ta taksidhja.
The.m.sg people.m.sg love.3s the.n.pl voyage.n.pl
‘People love voyages.’ (#’Some people like voyages’)

In examples like (16) only the generic interpretation is available, i.e. the reference is to the whole ensemble, in (16) this is to people and voyages. The indefinite existential interpretation is only possible with indefinite nominals, as can be observed in (17):

Kapij manavidhes kserun arithmitiki.
Some.m.pl grocer.m.pl know.3pl arithmetic
‘Some grocers know arithmetic.’

Greek generics thus lack indefinite interpretations. Therefore, they should not be treated as indefinites. Instead, they seem to convey some aspect of definiteness, and specifically, familiarity. Lyons (1999) also relates genericity to familiarity. He has argued in particular that genericity can be encoded in two ways cross-linguistically: semantically, the reference of the nominal is to the whole ensemble, what Lyons characterizes as familiar and thus at least partly definite; morphologically, with the definite determiner. In Greek, genericity is encoded in both ways: i.e. the definite article is present obligatorily and the definiteness denoted is familiarity.

Let us turn now to the English definite determiners. Starting from null D, similar to Greek, it is also present with proper names (cf. 18a), it allows restrictive nominals (cf. 18b), and it can be present in bare plurals with generic interpretation (cf. 18c):

a. Ø Mary saw Ø John driving by.
b. Ø Susan your neighbor, not your colleague.
c. Ø people love voyages.

English possessive pronominal D also allows restrictive nominals and can appear with proper names, e.g. my John. Scottish English the behaves similarly: it allows restrictive modifying nominals and it can also be present with proper names denoting perhaps some kind of possession: e.g. the uncle Clyde, not Alan.

In contrast, SE determiner the does not appear with proper names, it does not allow restrictive nominals, and it is not present in generic nominals:

a. * The Mary saw the John driving by.
b. * The professor the linguist
c. * The people love voyages.
Hence, there seem to be two types of definite determiners: (a) Determiners like SE *the*, which seem to restrict the nominal in a way that further restriction, e.g. by a definite modifying nominal, is impossible. Such determiners determine a unique familiar individual and they spell out uniqueness and familiarity; (b) the second group consists of determiners that allow further restriction on the noun. They do not determine a unique familiar individual, but rather only a familiar individual, spelling out familiarity.

Standard definitions of definiteness cannot account for the properties of these determiners, as some assume that uniqueness is involved (e.g. Heim and Kratzer 1998) and others familiarity (Heim, 1982). For the constructions discussed here, we need a simple and elegant account that allows determiners to spell out either uniqueness or familiarity, not only cross-linguistically, but within a language itself, since definite determiners may encode different aspects of definiteness.

3.3 The syntactic partition of definiteness

Based on the facts discussed in 3.2, I propose that definiteness involves two main components, *uniqueness* and *familiarity*. Depending on the determiner, these two components may map into two distinct syntactic projections, \( \iota P \) (iota phrase) for uniqueness and \( \text{FamP} \) for familiarity. Determiners like SE *the* are fully specified determiners that spell out both uniqueness and familiarity. Such determiners project fully definite phrases, \( \text{DefPs} \). In contrast, underspecified determiners, such as Greek and Scottish English D, and SE null and possessive D only spell out Fam. They thus project FamPs. Building on the structure so far, FamPs with RMN should look like in (20b):

\[
(20) \quad \begin{align*}
\text{a. } & \quad \text{To molivi to ksilino} \\
& \quad \text{The.} \text{n pencil.n the.} \text{n wooden.n} \\
& \quad \text{‘The wooden pencil’}
\end{align*}
\]

\[
\begin{align*}
& \quad \text{FamP} \\
& \quad \text{Fam} \\
& \quad \text{to} \\
& \quad (\text{the}) \\
& \quad \text{NP} \\
& \quad \text{molivi} \\
& \quad (\text{pencil}) \\
& \quad \text{NumP} \\
& \quad \text{NumP}\text{<et>} \\
& \quad \text{FamP}\text{<et>} \\
& \quad \text{NumP}\text{<et>} \\
& \quad \text{to ksilino} \\
& \quad (\text{the wooden one}) \\
& \quad \text{NP}\text{<et>} \\
& \quad \text{NP}
\end{align*}
\]

According to this structure, the modifier adjoins low to the nominal phrase. At LF it raises higher than Fam, but lower than \( \iota \), possibly at spec FamP and composes with Fam. Fam does not pick out a unique entity, but rather a set of contextually salient entities (e.g. the familiar wooden pencils). Since Fam
selects a set, and not an individual, FamP is a predicate, of type \(<et>\). It now follows why the intersective modifier may combine with it. They are both \(<et>\) predicates and they can combine via Predicate Modification. \(iP\) merges next, and \(i\) picks out the unique entity that is a familiar wooden pencil, giving us a nominal of type \(e\).

\[
(20) \quad iP_e
\]

\[
\text{FamP}_{<et>}
\]

\[
\text{Fam} \quad \text{NumP}_{<et>}
\]

\[
\text{to} \quad \text{molivi to ksilino} \quad \text{(pencil the wooden)}
\]

In contrast, fully specified determiners, such as SE the, project fully definite phrases, DefPs. DefPs are arguments, and do not compose with restrictive modifying nominals. Therefore, RMN with the-nominals is blocked:

\[
(21) \quad \star \text{DefP}_e
\]

\[
\text{Def} \quad \text{NumP}_{<et>}
\]

\[
\text{the} \quad \text{pencil the wooden}
\]

Hence, we can now give an account of why RMN is possible. RMN is possible with nominals headed by underspecified definite determiners. These determiners project a predicative FamP which may intersect with a restrictive modifying nominal.

By this proposal, we can also account for why English and Greek proper names allow RMN. The determiner of proper names is an underspecified Fam head. As such, it projects a predicative FamP, and thus RMN is possible. English and Greek proper names should therefore have a structure similar to (20), since they both come with a (non/-overt) Fam head:

\[
(22) \quad \text{a.} \quad \text{I Anna i ghlosologhos (oxi i}
\]

\[
\text{The.f.nom Anna.f the.f.nom linguist not the.f.nom singingaicas)}
\]

\[
\text{writer}
\]

\[
\text{Anna the linguist (not writer)}
\]

\[
\text{b.}
\]

\[
\text{iP}_e
\]

\[
\text{FamP}_{<et>}
\]

\[
\text{Fam} \quad \text{NumP}_{<et>}
\]

\[
\text{I}_\text{Greek (the)} \quad \text{I}_\text{English Anna i ghlosologos}
\]

\[
\text{Anna the linguist}
\]
Likewise, in the case of Greek definite generics, we have seen that these denote a familiar kind. Hence, the determiner must also be a Fam head. Unlike other FamPs though, generic FamPs should not be headed by ιPs. These are generic nominals and should thus be headed by a generic operator, which singles out the set of entities with specific properties (see Carlson & Pelletier, 1995 for more on this operator). Generic nominals thus must form GenPs. Accordingly, the structure of definite generics should look as in (23)

(23)

```
GenP_e
  |   FamP<et>
  |       NumP<et>
    Fam  o
       (the)  kozmos
        (people)
```

In conclusion, fully definite determiners, such as SE the, have a structure like in (24a). In contrast, underspecified determiners allowing RMN have the structure in (24b), where DefP decomposes to ιP and FamP:

(24)  a.  DefP_e
    |   Def
      |   theSE
      |   (NumP…
      |   D_Greek/D_Scott/Ω_SE/D_POSS-SE
  b.  iP_e (/GenP)
    |   FamP<et>
    |   Fam
    |   (NumP…

Hence, we now have an elegant account of what makes RMN is possible. When the features of definiteness, uniqueness and familiarity, map into distinct projections, ιP and FamP, RMN is possible. When they map into a single projection, DefP, RMN is successfully blocked.

3.4 The restrictive modifying nominal

So far, we have taken the restrictive modifier to be a predicate that intersects with matrix FamPs. According to Heim & Kratzer (1998) intersective restrictive modifiers must be <et> predicates, like other restrictive modifiers are, such as adjective phrases and relative clauses.

In Greek, the restrictive modifier is a FamP, since the determiner is a Fam head. Since FamPs are predicates, they easily intersect with matrix FamPs.

However, in English, definite modifiers, and in particular the-modifiers, are argumental DefPs. That is, they determine unique individuals. Hence examples like (25) are ungrammatical:

---

1 In the case that genericity does not come from the nominal, but from the predicate VP, it might be that the generic operator is higher. Many thanks to Ana Teresa Pérez-Leroux and Christina Schmitt for pointing out this possibility.
Such data raise the question of how argument DefPs can be treated as predicative modifiers. Holmberg (1993) provides us with a solution. Briefly, in his work on predicative nominals in copular constructions, Holmberg argues for a theory of predication whereby a predicate is the maximal projection of a head containing an open argument position. He argues that predicate nominals contain an empty pronoun licensed by the article. I adopt his analysis here, and assume in particular, that modifying the-DPs, such as the teacher in (26a), have the structure in (26b):

(26) a. John [the teacher]  
   b. DefP_{et}->  
      e/ DefP_e  
      Def the/ nP  
      the/ teacher

In all, we now have an account for the distinct properties of these constructions. In the case of underspecified determiners, definiteness is mapped onto two distinct syntactic projections, iP and FamP. FamPs are predicative and they can intersect with predicative modifying nominals, whether these are FamPs or DefPs. In contrast, matrix DefPs are fully definite and thus intersection with restrictive modifiers, regardless of their specification in terms of definiteness, is successfully blocked.

4. In conclusion

In this paper, I provided a simple and straightforward account of what licenses RMN. I have argued that RMN is a direct effect of how definiteness is encoded in a language: if a definite determiner is semantically underspecified, familiarity maps onto a distinct projection and thus RMN is possible.

It now follows that polydefinites are not a unique property of Greek or languages with rich inflection. Rather RMN is an epiphenomenon of how definiteness is encoded within a language.

This analysis also captures nicely the possibility that definite determiners like those in Greek, are not like regular Ds but should not be treated as expletives either. Such determiners are semantically underspecified, spelling out only one aspect of definiteness, Fam. In the future, it would be interesting to look at a wider range of languages and examine whether the same type of underspecification is present there as well.

Furthermore, this analysis offers a new way of exploring restrictive modifiers. It also sets the foundation for future research on the semantic properties of such constructions outlined here.

Finally, some interesting new areas are now open for further research, such as the syntax and semantics of non-restrictive modification by nominals,
and in particular whether these can be tied under a similar mechanism. If this is the case, then both types of nominal modification can be unified under a single, straightforward mechanism.

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