POLYDEFINITES IN MODERN GREEK: THE MISSING LINK

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Abstract

In this paper, polydefinites in Modern Greek are revisited from the perspective of Dynamic Syntax. The paper follows the idea set forth by Lekakou and Szendroi, 2012 according to which polydefinites are instances of apposition, in particular close apposition. Building on this idea, it is argued that` loose' polydefinites, i.e. polydefnites that are instances of loose apposition, can also be found. The structure and differences from standard polydefinites are discussed from a dynamic perspective, bringing out the similarities between close appositions and normal polydefinites on the one hand, and loose appositions and loose polydefinites on the other. Lastly, some issues with respect to a number of cases where restrictive interpretation fails in regular polydefinites are discussed briefly.

1. Introduction

The term 'polydefinite' refers to cases of adjectival modification where both the adjective and noun are preceded by their own determiner. Ordering between the adjective and the noun becomes free in the case of polydefinites, contrasting with the regular monadic definite construction where only the A-N construction is allowed:

1) To megalo to spiti/ To spiti to megalo
   the big the house the house the big
2) To megalo spiti/ *To spiti megalo
   the big house the big house
   'The big house'

Besides the differences in terms of word order, the two structures seem to involve interpretational differences as well. Kolliakou (2004) argued that the difference between the two structures, lies in the fact that polydefinites give rise to a restrictive interpretation of the DP, while monadic definites do not necessarily involve such an interpretation. In this respect, Kolliakou (2004) argues that the use of the polydefinite in 4) gives rise to an interpretation where both young and non-young cats exist in the context, with the polydefinite restricting the interpretation to the set of young cats (3). For monadic definites this interpretation is not necessary (3):

3) O Yannis taise ta zoa. I mikres gates itan pinasmenes.
   the John fed the animals the small cats were hungry
4) O Yannis taise ta zoa. I mikres i gates itan pinasmenes.
   the John fed the animals the small the cats were hungry

Various accounts of polydefinites have been put forth by the years (Alexiadou and Wilder 1998, Campos and Stavrou 2004, Kolliakou 2004, Panagiotidis and Marinis 2011 and Lekakou and Szendröi 2012 among others). One of the recent ones, Lekakou & Szendröi (2012), draws the parallelism between polydefinites and appositional structures. In particular, the claim is that polydefinites are in fact close appositions. In this paper, this central claim is followed but moved to a dynamic/incremental model of syntax, i.e. Dynamic Syntax (DS, Kempson et al 2001; Cann et al. 2005). The central goal is to show that the parallelisms between the two structures are even more, suggesting the existence of polydefinites which resemble loose appositions as well. Data that provide evidence for such a claim are presented, and a unified DS account for both regular polydefinites and close appositions on the one hand and loose polydefinites and loose appositions on the other are provided. Lastly, problematic cases where the restrictive interpretation associated with polydefinites does not arise and instead a non-restrictive interpretation arises, are discussed briefly.

2. Polydefinites and appositions: The case for loose polydefinites

It is a well-known and rather uncontroversial fact that appositions come into two guises, close and loose appositions. The most commonly used diagnostic is the presence of an intonational break in the case of loose appositions (6), and its absence in close appositions (5):

5) Burns the poet (CA)
6) Burns, the poet (LA)

Assuming that polydefinites are indeed instances of close apposition, the question is whether instances of polydefinites on a par with loose appositions can be also found. The discussions in the literature are not illuminating in this respect. The accounts that draw on the parallelism between the two structures maintain that polydefinites are instances of close and not loose apposition (e.g. Lekakou and Szendröi 2012). This is indeed true for the cases of polydefinites examined in these papers. However, it seems that other cases of polydefinites which are instances of loose and not close apposition can be found. These structures are going to be referred to as loose polydefinites. Thus, what I'm going to for is that the close/loose apposition distinction can be also found on the level of polydefinites. This is of course hardly surprising. To the contrary, given that polydefintes are instances of apposition, it would be strange if only one of the two guises of apposition is found. In order to see what we mean with the term 'loose polydefinite', consider the example shown below:

7) Pios itan aftos o laos? I efevritiki, i demonii, i Kinezi
Who was this the people the inventive the fiendish the Chinese
'Who were these people? The inventive and Fiendish Chinese'

In the above example, the two adjectives modifying the common noun are separated by comma intonation and furthermore the usual restrictive interpretation associated with close appositions does not arise here. The above sentence can be interpreted only non-restrictively. This is a clear instance of what I call a ‘loose polydefinite’. Order in loose polydefinites is free, a well-known fact for regular polydefinites well:

8) I Elines, i tempelides, i aneprokopi ine ipefthini
the Greeks the lazy the shiftless are responsible
`The lazy and shiftless Greeks are to blame’

Structures like the above show that instances of what we can dub as loose polydefinites can be also found. The purpose of this paper is to provide an account that covers both regular and loose polydefinites. But before we get into this, we briefly introduce the framework to be used in this paper, i.e. Dynamic Syntax (Kempson et al. 2001; Cann et al. 2005).

3. Intro to Dynamic Syntax

3.1. Theoretical preliminaries

Dynamic Syntax (DS) is a framework which departs from standard grammar formalisms in making the concept of processing in real time the core syntactic notion. Structure is progressively induced from the left periphery rightwards, incorporating the concept of structural underspecification and its subsequent update into the grammar itself. Moreover, the structural representation of interpretation is the only level of representation: the progressive left-to-right induction of such “logical forms” is the only concept of syntax. The grammar is, accordingly, a constraint-based system of mechanisms for building up interpretation for a sequence of words in the order in which they appear. The output from such a sequence of steps is a tree structure corresponding to an interpretation of the string, as in the binary branching structure displayed in (9). Crucially, this is not a tree that is inhabited by the words of the string, but by the composite logical form constructed from the string, relative to whatever context-based choices are made during the parse process. The logical formula constituting the proposition decorates the top node, together with a typing specification; and labels on other nodes reflect typed subformulae of the rootnode formula. But this is by no means all there is to syntax. Central to this concept of syntax is the incremental monotonic building up of these tree-structure representations of content, as driven by the initially imposed goal of building up some propositional representation using the words in the order provided incrementally. In the simple mono-clausal sequence demonstrated by (26), the starting point of the process is a tree with just a rootnode and a requirement to construct some propositional formula annotated as *?Ty(t);* the endpoint is a fully decorated binary branching tree structure encoding the functor-argument structure of the propositional formula established:[1]

[1] This display of input and output (partial) trees is somewhat simplified for illustration purposes, for it assumes an empty context and a completely specified goal. The mechanisms themselves, which constitute the grammar, reflect growth of information against an arbitrary structural context, itself defined in terms of partial trees. In all such trees, Fo is a predicate that takes a logical formula as value, *Ty* a predicate that takes logical types as values, and each node in a tree is assigned a label *Tn(X)* which

9) Parsing *o Giorgos filise ti Maria* ‘Giorgos kissed Maria’

Insert figure 1

The notion of *requirement* on successful completions is central to the system, for it is this which gives the system its goal-directedness: some output type t formula is achieved through the parsing of the words in virtue of the initial goal, a *requirement* *?Ty(t)* that some such propositional formula be a prerequisite for all wellformed outputs. More generally, for any decoration *X*, the corresponding requirement *?X* is expressible, and wellformedness resides in meeting all requirements that get imposed during a parse process.

To capture the dynamics of what is involved in imposing requirements and subsequently resolving them, the concept of *partial tree* is critical, and the heart of the formal framework is a tree-description language enabling such trees to be explicitly defined, and the concept of growth across them. The tree description language is the modal logic of finite trees (LOFT: Blackburn and Meyer-Viol 1994), and with its expressive power, the articulation of different concepts of underspecification and their update is straightforward to express. LOFT has two basic modalities, $\langle\downarrow\rangle$ and its inverse $\langle\uparrow\rangle$. $\langle\downarrow\rangle\alpha$ holds at a node if α holds at a daughter node, and $\langle\uparrow\rangle\alpha$ holds at a node if α holds at its mother node (subcases are $\langle\downarrow_1\rangle$for argument daughters, $\langle\downarrow_0\rangle$for functor daughters, with inverses $\langle\uparrow_1\rangle$, $\langle\uparrow_0\rangle$). An additional LINK modality is defined to capture pairing of trees. Domination relations are definable, as is standard, through Kleene star operators, e.g. $\langle\downarrow^*\rangle$*Tn(a)* for some node identified as dominated by treenode *Tn(a),* formally a disjunction of mother relations (see e.g. Rogers, 1994). Domination relations are definable over other operators (for example $\langle\uparrow^*\rangle$*Tn(a)* picking out a functor spine); and compound concepts can be defined, for example, $\langle\uparrow_0\rangle\langle\uparrow_1^*\rangle\langle\downarrow_0\rangle$*Tn(a),* which picks out a set of arguments for a given predicate (those between which the defined locality relation holds).

The various concepts of underspecification which can be expressed in LOFT are:
(i) structural underspecification, which depicts an “unfixed” node $\langle\uparrow^*\rangle$ *Tn(a),* for which at the time of its construction there may be no more specific domination relation from it to the node Tn(a).
(ii) the presence also of “locally unfixed” nodes as in a tree relation $\langle\uparrow_0\rangle\langle\uparrow_1^*\rangle$*Tn(a)* to some node *Tn(a)* indicating that from the node immediately dominating that argument node, there are only functor relations between it and the node Tn(a), hence its hierarchical position is constrained to be within a minimal propositional structure.
(iii) content underspecification definable for tree-node decorations, for example with metavariables.

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identifies its unique position in that tree, e.g. *Tn(0)* identifies the rootnode. The ◊ is a pointer, indicating the node currently under development. In this paper, we ignore tense and aspect. However, see Cann, 2011 and Chatzikyriadis, 2011 for implementations of tense and aspect within the DS framework.

Fo(U), Fo(V)... ranging over possible formula values for context-dependent expressions (pronouns, ellipsis sites etc); (iv) syncretic morphology inducing type as well as hierarchical underspecification *Ty(X)*. Each of these aspects of tree development impose partial specifications which are associated with a requirement for update.

3.2. Building LINK relations

Besides tree structures in which each sentence involves a single tree (regardless of tree embedding), DS also makes use of pairs of trees which are linked to each other via a relation called LINK. LINK structures involve two separate tree structures linked by means of an arrow relation (LINK), that share in most of the cases a term. The node from which the LINK starts can be seen as setting the context in which the LINKed tree is going to be parsed. Examples of structures that have been accounted for using LINK relations in DS include relative clauses, in which case the relative clause is parsed within the context of the head and HTLD constructions in which case the HTLD sentence is parsed within the context of having parsed the left-dislocated element first, among others (see Cann et al. 2005 for more details).[2] For the needs of this paper, we exemplify the use of LINK structures by looking at the DS analysis of Hanging Topic Left Dislocation structures. The core idea is that in HTLD, the dislocated element functions as the context in which the rest of the sentence is parsed. The HTLD element and the rest of the sentence appear as separate tree structures, with a requirement that a copy of the HTLD element is to be found at the main tree. There are a number of formal details here, like e.g. the triggering of such a rule and the its formal format, but I will not go into these details here. The interested reader is directed to Cann et al. (2005) for a detailed exposition of this. What is relevant for the purposes of the paper, is to understand the general idea behind LINK structures, i.e. the notion of linked trees that share a term. Thus, in the example below, the tree where the LINK starts (with no pointed arrow), is the tree where the HTLD element has been parsed, while the LINKed tree (with the pointed arrow), the tree in which the rest of the sentence is going to be parsed. Notice that this tree has a requirement to share a term with the previous tree, in effect a copy of the HTLD element must be found in the LINKed tree (*?<D>Fo(Giorgos'))*:*

10) Insert figure 2

As we will see, the LINK mechanism will be used in order to analyze appositions and thus polydefinites as well.

3.3. The structure of quantified NPs

Unlike pretty much all semantic analyses based on generalized quantifiers, DS assumes NPs to be of the lowest semantic type possible, namely type *e*. Then, the complexity quantified NPs exhibit is captured assuming that NPs, even though being

[2] LINK is one of the very general structure building mechanisms in DS. It has been further argued to be used in coordinating as well as subordinating structures (see for example Cann et. al 2005, Gregoromichelaki 2005 among others).

of type *e*, involve complex structure. The structure assumed for NPs in DS is the one depicted below. Note that this internal structure corresponds roughly to the mainstream view on the structure of the DP in GB/Minimalism (Abney, 1987). The equivalences to DP structure are shown in parentheses:[3]

11) Insert figure 3

As can be seen from the above tree structure, NPs in DS, even though assumed to be of the lowest type possible (*Ty(e)*), involve additional structure. Let us see what this additional structure stands for. The highest node is the node where the result of compiling all the other nodes via modus ponens and functional application is encoded, roughly the DP node in GB/Minimalism. The node indicated as 'QUANTIFIER' is the node which will contribute the information on the form of quantification involved in each case. This node combined with the *Ty(cn)* (common noun) node will give us the higher *e* node. The RESTRICTOR node provides the binding domain of the variable introduced in the lower type *e* node (the variable node). NP content is expressed using the epsilon calculus.[4] Getting into more detail, let us see the dynamics of building quantified NPs. First the quantifier comes into parse, building the top nodes and inducing the quantification involved in each case:[5]

12) Insert Figure 4

Then, the common noun comes into parse, *man* in our case, building the lower nodes, providing the restrictor information as well as the lower variable to be bound by the restrictor:

13) Insert figure 5

The usual rules of modus ponens and functional application apply, providing formula and type values for all the nodes and eliminating any outstanding requirements:

14) Insert figure 6

4. Polydefinites

4.1. Restrictive interpretation as a core property of polydefinites

Kolliakou (2004) was the first researcher to discuss in detail the restrictive modification that polydefinites give rise to. Kolliakou argues that the interpretation of

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[3] DS, as already mentioned, does not represent word order in its semantic trees. Therefore, the structure assumed for NPs does not encode word order.

[4] We cannot go into details here but the interested reader is directed to Cann et al. (2005), Chatzikyriakidis (2010) for a more detailed exposition of the system of quantification in DS as well as to Hilbert and Bernays (1939) for the formal underpinnings of the epsilon calculus.

[5] There are a number of other details like for example issues with respect to the scopal properties associated with quantifiers or the exact lexical entries that give rise to the tree structure shown above. The interested reader should consult Kempson et al. (2001) and Cann et al. (2005) for a detailed discussion and exposition of these issues.

polydefinites always involves what she calls non-monotone anaphora. Based on this observation she formulates what she calls the polydefiniteness constraint:

15) THE POLYDEFINITENESSC CONSTRAINT. Greek polydefinites are unambiguously non-monotone anaphoric expressions: the discourse referent Y of a polydefinite is anaphoric to an antecedent discourse referent X,
such that Y c X (Kolliakou 2004: 273)

According to this view the polydefinite picks a proper subset of a set previously introduced in the discourse. Note that monadics are ambiguous between a monotone and a non-monotone interpretation. In the same vein, Lekakou and Szendröi (2012) take this semantic restriction to be a core property of polydefinites. They distinguish between a restrictive and a non-restrictive interpretation, a distinction roughly corresponding to non-monotone and monotone interpretation.[6] Polydefinites give rise to a restrictive interpretation while monadics are ambiguous between the two. This behaviour of polydefinites stems from the fact that polydefinites are in fact close appositions. It is a well-known fact in the literature that close appositions, in contrast to loose appositions and putting aside many other differences between the two constructions, give rise to a restrictive interpretation as witness the examples below:

16) o aetos to puli
the eagle the bird
'The eagle that is a bird'

The similarities between close appositions are obvious. Firstly, as already mentioned, both constructions give rise to a restrictive interpretation. Secondly, the order between the two constituents in both close apposition and polydefinites is free (see Stavrou, 1995 and Lekakou and Szendröi2012 among others):

17) (to megalo) to vivlio (to megalo)
the big the book the big
'The big book.'

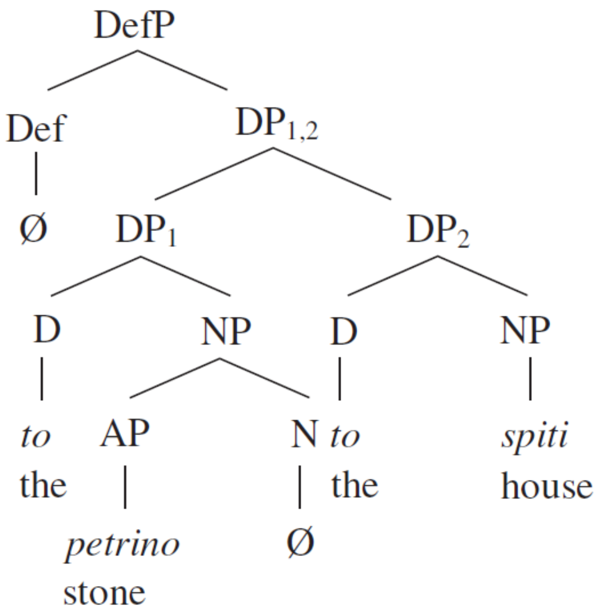
18) (O Papadopulos) o diktatoras (o Papadopulos)
the Papadopoulos the dictator the Papadopoulos
'The dictator Papadopoulos.'

Lastly, both constructions accept only definite determiners. Based on these similarities propose an account of polydefinites where these are treated as instances of close apposition. They propose a symmetrical structure according to which the two DPs do

[6] It has to be noted that Kolliakou's polydefiniteness constraint needs to be modified in order to accommodate case examples where a polydefinite is anaphoric to a discourse referent that is a proper superset of the noun participating in the polydefinite, e.g. animal ⊃ cat or cat ⊂ animal. As Lekakou and Szendröi 2012 correctly argue, the polydefinite *i mikres i gates* can be true in a situation where there are only small cats, given that small cats ⊂ cats.

not c-command each other, the only difference between the two being that the DP hosting the adjective involves noun ellipsis:

19) The tree structure for *to petrino to spiti*, 'the big the house' (taken from Lekakou and Szendröi 2012: 121)



The semantics of polydefinites as well as appositions are derived via Higginbotham's R-role identification, in effect a rule that identifies the theta-role of the adjective with that of the noun. In terms of semantics, the result of this process is set-intersection. This latter fact suffices to explain the fact that only adjectives whose semantics are based on set intersection are allowed in polydefinite constructions.[7] Of course, this does not suffice for the restrictive reading we want to achieve in the case of polydefinites. Thus, a rule is proposed that restricts the application of identification only in cases where the set denoted by the adjective and the set denoted by the noun are not the same set:

20) *Ban on vacuous application of R-role identification:* R-role identification is banned if it yields an output identical to (part of) its input (Lekakou and Szendröi 2012: 125).

[7] I do not refer to intersective adjectives, given that in the formal semantics literature on adjectives (Kamp 1975; Partee 2007 among others) two classes of adjectives, i.e. intersective and subsective involve set intersection, the difference being that in the second case the adjectival property is only relevant for the particular class that the noun denotes. To give an example, think of the following inference associated with a subsective adjective like *big*: a big cat does not imply a big animal. To the contrary, intersective adjectives like *black* do not rely on the class of the noun and thus inferences like a black cat → a black animal are valid. For a classic treatment of the basic types of adjectives consult Partee (2007). For a modern type theoretic treatment in the tradition of Martin-Löf that captures these inferences without the aid of meaning postulates, see Chatzikyriakidis and Luo (2013).

The account makes a number of correct predictions, including ordering, the range of adjectives that can participate in polydefinite constructions and most importantly it captures the restrictive interpretation that polydefinites give rise to.

4.2. Polydefinites in DS

Appositions in DS are analyzed as involving a LINK structure, which links the two elements. But how can we make sense of the two instances of apposition, i.e. loose and close? There is a rather natural way to do that given the assumptions made in DS as regards DP structure. Remember that the complex DP structure involves two type *e* nodes, the lower variable one, and the higher one after compilation of the whole DP has been made. These two nodes are basically the key to explaining the differences between close and loose appositions. The idea is that in the case of close apposition the LINK relation is initiated from the internal type *e* node, while in loose apposition from the higher type *e* node. The two different structures are shown below:

21) Insert figure 7
22) Insert Figure 8

In the case of close apposition, the appositive structure is compiled before the DP has been compiled (in our case *my friend*), while in the latter, compilation of the DP has been done first in order for the LINK relation to be initiated. I effect, in the case of close apposition, the two structures are more tightly connected, while in the case of loose apposition they are loosely connected as two individual trees. In example (21), the LINK relation is initiated starts from the internal node, the variable node. When the LINKed node is compiled, the compilation of the main tree can proceed. But now, the variable *x* is already given a value (i.e. *poet(x)*) and thus compiling *λy. my_friend(y)* to *my_friend'(x)* is dependent on *x* already being a poet, something which does not happen in loose apposition. In this respect, there is a some sort of dependence between the two DPs in close apposition that is absent in loose apposition. This can be taken to be the reason where the restrictive interpretation arises in close apposition in the following sense: if the two sets, i.e. the contextually relevant set of my friends and the set of poets are identical, then what we get is $my\_friend(x_{poet})$, that is an *x* which is my friend, given that he is a poet. But if the set of poets and my friends are identical, we get an obvious repeat of information. In this respect, I argue that in cases of close appositions a further restriction on the relation between the two sets is imposed that gives rise to the restrictive interpretation.[8] LINK rules are subject to an evaluation rule, which provides the semantics arising out of the combination of the two LINKed structures. Given that LINK structures are used in a wide variety of cases in DS, i.e. relative clauses, adverbial clauses and cases of apposition like the above, these semantics depend on the structure in each case. For the cases of apposition, the result is just a conjunction of the individual terms. The only difference is then, that in close

[8] Note that in spirit this is similar to the ban on vacuous application of R-role identification proposed by Lekakou & Szendröi (2012: 125).

appositions a further restriction on the relation of the two sets is imposed that gives rise to the restrictive interpretation. The two rules are shown below:

23) Insert figure 9
24) Insert figure 10

Without getting into the formal details, the above say that if two DPs are linked then the result is the intersection of the two individual formula values. In the case of close appositions the extra condition discussed above is imposed.

Moving on to polydefinites, we follow pretty much the same analysis with some minimal modifications. The differences in the two structure stem from the fact that in polydefinites an adjective is involved. Restricting the domain to intersective/subsective adjectives for the moment, I take adjectives to involve the projection of a formula value at the same node common nouns project their semantics. The only difference is that the semantics of adjectives are not a single lambda abstracted predicate, i.e. *λy. man(y)* but rather a conjunction of two predicates, one for the adjective and one for the common noun. The adjective provides the adjectival predicate and further imposes a metavariable standing for the common noun predicate to be substituted either from the natural language string itself or from the context (noun ellipsis in Greek). For an adjective like *megalos* 'big', we will get the following semantics:

25) λy. (y,megalos(y) ∧ U(y))

In monadic constructions, the common noun projects its semantics, say in the case of *antrhopos*, *λy. anthropos'(y),* in effect providing a value for the metavariable *U*. In the case of polydefinintes, things are different given that a LINK relation is involved, assuming that polydefinites are in fact instances of close apposition. In order to see how this works, let us look at the parse of o *megalos o anthropos,* 'the big man'. The determiner and the adjective are parsed, the first providing information on the form of quantification (the iota operator) while the second the semantics as discussed in (25):

26) insert figure 11

Then a LINK relation starts from the internal *e* node, and the noun is parsed on the LINKed tree:

27) Insert figure 12

Now, the LINK evaluation rule takes place giving rise to the restrictive semantics associated with polydefinites. This rule is a little bit modified given the different semantics associated with adjectives compared to nouns:

28) Insert figure 13

In the case of the opposite word order *o anthropos o megalos*, the same procedure is followed. The only difference is that the adjective instead of the noun is parsed on the LINKed tree. Multiple occurences of polydefinites just involve multiple LINK structures. Thus, the word order facts are correctly captured within this account.

4.3. Loose polydefinites

Loose polydefinites pattern on a par with loose appositions. This means that the LINK relation must start from the higher type *e* node. There is a big difference between the two structures (polydefinites and loose polydefinites) which has to do with the fact that in order to provide a LINK relation from the top type *e* node, the metavariable projected by the adjective must be provided via the context. In order to reach the higher type *e* so that the LINK relation can be initiated, the lower types must have been given proper formula values. This means that the metavariable standing for the semantics of the common noun must be replaced with a proper formula value. In this respect, if the context is not rich enough to provide a substitution of the metavariable with a proper value, no LINK relation can initiated from the top node. Consider the following example showing the structure after *i efevretiki* 'the fiendish' in *i efevritiki i Kinezi* 'the fiendish Chinese' is parsed:

29) Insert figure 14

In this case, if the metavariable standing for the common noun in the conjunction is not able to be substituted (U), then the parse cannot move up to the type *e* node.[9] This would mean that we need a value for *Chinese* to be provided by the context. It can be argued that it seems difficult to provide a value for *Chinese* from that early on. It seems however plausible to assume that updating can be done with a more general common noun that the target noun (i.e. *Kinezi*) is a subtype. For example, it could be the case that updating is done via the more general common noun *anthropi* 'humans' in our example. In this case, the result we get is as follows:

30) Insert figure 15

From this point on the LINK can be initiated, where the common noun *Kinezi* is to be parsed and LINK evaluation can proceed. The account just sketched predicts that loose polydefinites will be more difficult to find than regular polydefinites, given that in order to proceed with loose polydefinites one must be able to provide a value for the common noun before the actual common noun is parsed. In this sense, if the context is not rich enough to allow substitution of the metavariable with the value for the common noun, a loose polydefinite cannot be parsed. This seems compatible with the

[9] It is assumed that in order for the parse to move from a node to the one higher up, the current node must satisfy the type and formula requirement, thus to have proper type and formula values. The diamond sign indicates the node where the parsing process is on at a given time.

data, given that loose polydefinites are in general not that good when uttered out of context:

31) ?Ta megala, ta petrina, ta spitia
the big the stone the houses
32) ?To kokino, to megalo, to aftokinito
the red the big the car

Notice, that the example we have investigated, involves a loose polydefinite where the adjective is parsed first. Then, we have assumed that in order for the LINK relation to be initiated, the context must provide a value for the metavariable standing for the common noun. This is presumably, as already argued, the reason why these constructions are not that common, given that they need contextual aid in order to be well-formed. On the other hand, we would expect cases where the noun comes first to be easier to find given that no substitution of the metavariable needs to be done in this case. Indeed, it seems that cases of N + A loose polydefinites are better than the respective A + N ones:

33) O filos mu, o omorfos
the friend my the handsome
'My handsome friend'
34) ?O omorfos, o filos mu
the handsome the friend my
'My handsome friend.'
35) I Elines, i aneprokopi ine ipefthini
the Greeks the shiftless are responsible
`The shiftless Greeks are to blame.'
36) ?I aneprokopi, i Elines ine ipefthini
the shiftless the Greeks are responsible
`The shiftless Greeks are to blame.'

The above facts can receive a natural explanation within the account proposed. This is because in (34) and (36), the adjective is parsed first. Then, in order for the LINK relation to be initiated, one has to substitute the metavariable with a proper value. If the context is not rich enough (like the contextless examples above), then this will not be possible, thus giving rise to the reported deviance. However, in the opposite case, i.e. in case the noun is parsed first, no problem arises. This is because the noun will not involve any outstanding metavariables. The following tree depicts the structure, after *o filos mu* 'my friend' has been parsed:[10]

37) Insert figure 16

[10] The semantics of the possessive clitic are ignored.

From this point on, compilation can proceed via functional application and modus ponens, giving rise to the structure in (38), where a LINK relation can now be initiated (39):

38) Insert figure 17
39) Insert figure 18

Substitution of the metavariable is now possible either via the LINK evaluation rule or indeed from the context (given that *o filos mu* 'my friend' acts as the linguistic context in this case).

To recap, I argued that besides regular polydefinites, loose polydefinites can be also found, i.e. constructions on a par with loose appositions. The DS approach allows us to capture both constructions in a natural way, while it further predicts that loose polydefinites should be more difficult to find than regular polydefinites. The existence of loose polydefinites reveals a more symmetric picture of polydefinites in relation to appositions, where correspondence not only to close but to loose appositions as well exists. More work should be done on the issue, in order to decide the exact range of loose polydefinites as well as their exact semantic/pragmatic import. For the moment we leave the issue here.

Remark 1. A general LINK evaluation rule can be proposed for all cases for people that consider the different LINK evaluation rules redundant. This is shown below. Note that the underspecified modalities capture both the case of close and loose polydefinites:

40) Insert figure 19

For the case of close appositions the additional restriction on the relation of the two sets is imposed as in (24).

5. Some remarks on cases where restrictive interpretation does not arise

There are a number of cases identified in the literature that restrictive interpretation in polydefinites does not arise. Examples of such cases are shown below:

41) O eksipnos o aderfos mu pige telika
the smart the brother my went finally
'My wise-ass brother went in the end.'

42) O lefkos o pirgos
the white the tower

43) Ta megala ta ktiria pu su elega ine afta edo
the big the buildings that you told are these here
'The big buildings I was telling you about are these.'

44) Context: O Giorgos ixe tris mikres gates tis opies agapuse ke den apoxorizotan pote.
Parola afta, mia mera i mikres i gates to skasan
however one day the small the cats it ran
'George had three small cats that he loved and never parted with them. However, one day the small cats ran away.'

45) Vgike ekso ston krio ton kero
went out to-the cold the weather
'S/He went out into the cold weather'

Examples like the above are mentioned in the literature and are considered problematic for an account based on restrictivity. However, it seems that most of the cases can receive a clear explanation of why this behavior arises. Due to space limitations, I cannot go into full detail here but mention very briefly why this is so.

Cases like 41) are easy to explain, given that the adjective in this case functions as an epithet rather as an adjective. This can be easily checked by using the usual diagnostics for epithets (see Higginbotham 1985, Lasnik and Stowell 1991 among others. See Chatzikyriakidis 2014 for the diagnostics in the case interested). Thus, the explanation of non-restrictivity should be done within a theory of epithets rather than adjectives. In the case of 42), it seems that this kind of polydefinites are not a productive part of the language, and in this sense, the proposal by Lekakou and Szendröi (2012) that such cases can be vestiges of an older restrictive usage, where *lefkos pirgos* had in effect a compositional meaning, distinguishing it from other towers via its colour does not seem implausible. Chatzikyriakidis (2014) provides arguments why this is the case.[11] One of them is that indeed similar cases of landmarks involving a A + N construction are not good in a polydefinite construction (e.g. cases like *o kitrinos o potamos, to prasino to akrotiri*), arguing for the non-productivity of such constructions in this respect. Cases like 43) hand can be explained, assuming that polydefinites can receive a non-restrictive interpretation if their referents are very low in terms of accessibility.[12] In syntactic terms, this translates into long DPs having more chances to be compatible with non-restrictive interpretations of polydefinites. It is of course not very clear how a counting measure of accessibility can be given in this case, i.e. providing a definite measure above which non-restrictive interpretation arises, but however some clear cases of long DPs can be taken to be more prone to a non-restrictive interpretation than shorter DPs, given identical contextual information is at play in both cases. On the other hand, we can make sense of examples like 44), by assuming that polydefinites can be also used in order to signal a topic-shift. The above examples are clear examples of topic-shift, the adverbial *mia mera* 'one day' being prototypical example of expressions that are used in order to signal topic-shift in the literature on narrative discourse structure (see for example Costermans and Bestgen

[11] Constructions like these have been mentioned in the literature, see Manolessou 2000; Panagiotidis and Marinis 2011; Lekakou and Szendröi 2012 among others.
[12] The reader is directed to Ariel (1988, 1991, 1996 among others) for a theory of how referents become accessible, i.e. accessibility theory.

1991; Zwaan 1996). Lastly, examples like 45) still remain problematic and at least the author does not know what is the reason that makes these constructions possible with a non-restrictive interpretation. Lekakou and Szendröi (2012) mention that the referent of the DP is somehow topical in these cases. However, the exact status of these constructions in terms of their pragmatics as well as their semantic difference to their monadic counterparts is yet to be understood. This paper is no exception to this, and unfortunately has nothing to offer on these constructions. Thus, we, like all the researchers before us, leave the exact pragmatic/semantic import of these cases as a subject of future research. However, the interested reader, as already said, is directed to Chatzikyriakidis (2014) for a more thorough discussion of the cases discussed in this section.

6. Conclusions

In this paper, I made the claim that polydefinites come into two guises: a regular and a loose one. The first guise is what has been dealt with in the literature, while the latter has not received any attention whatsoever. Assuming that regular polydefinites are instances of close apposition, the case of loose polydefinites comes as no surprise, given that it can be seen as the polydefinite counterpart to loose apposition. Furtermore, a DS account that captures the difference between the two structures was proposed. Lastly, a brief discussion on a number of cases where restrictive interpretation with regular polydefinites fails was presented and it was shown that a number of problematic cases where non-restrictive interpretation arises unexpectedly have a clear explanation.

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Figure 1

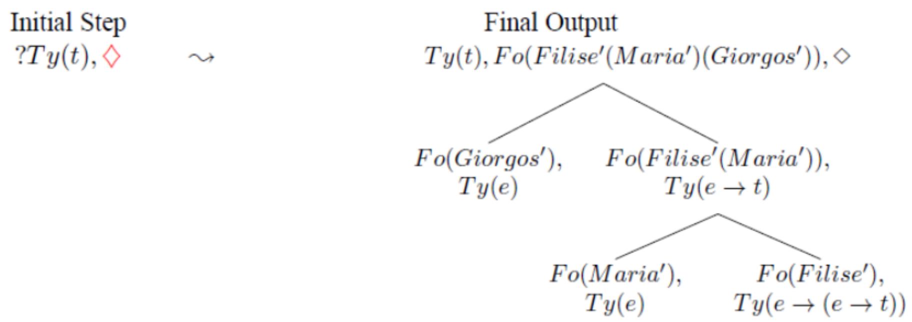


Figure 2

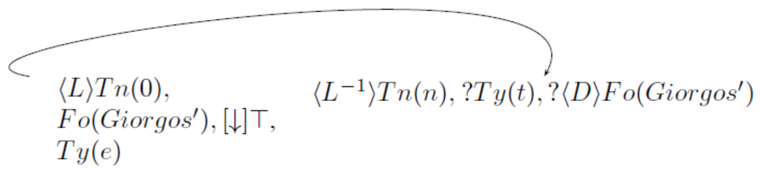
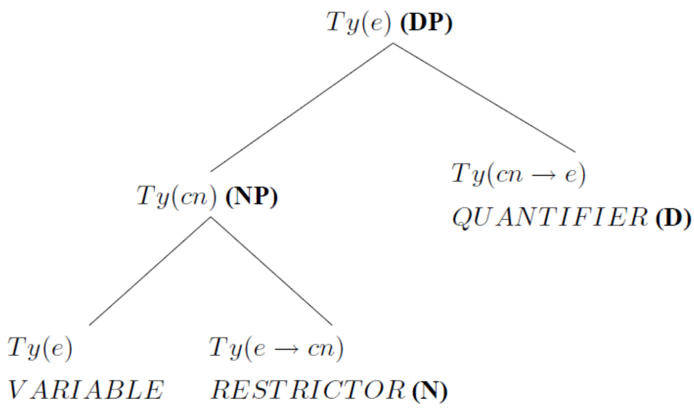


Figure 3



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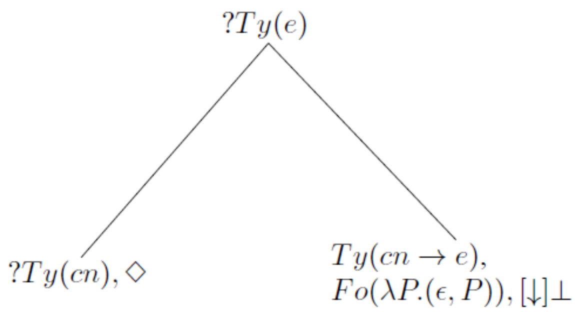

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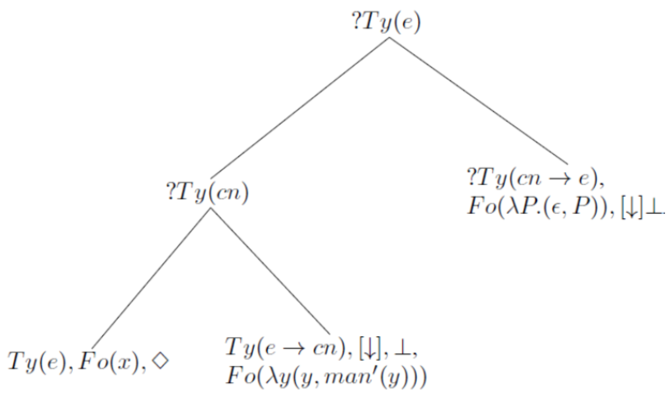

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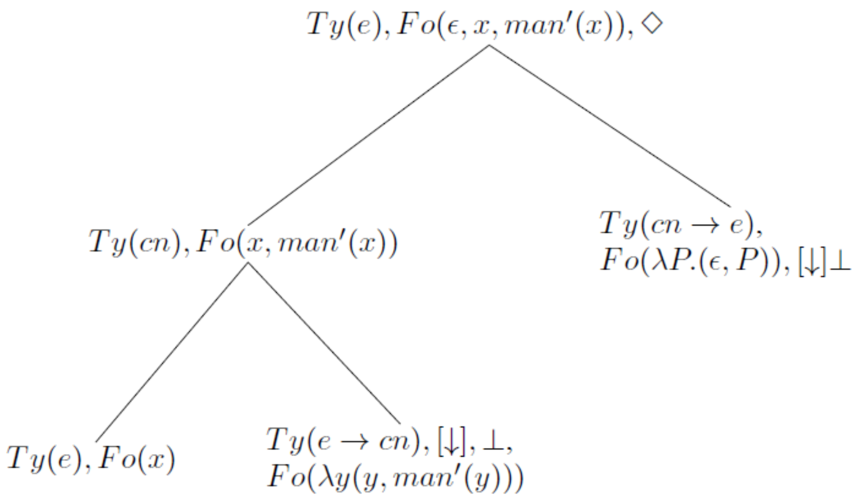

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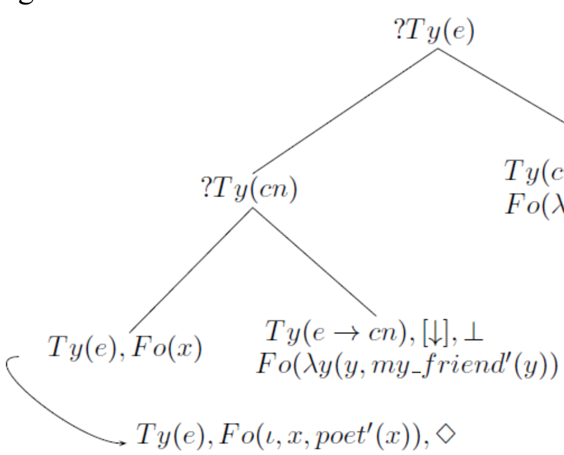

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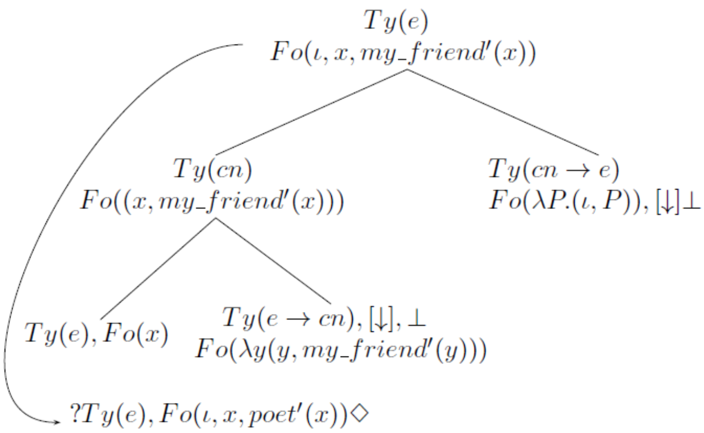

Figure 9

$$\frac{\{Tn(a), ..., Ty(e), Fo(\alpha(x)), ...\}\{(L \vee L^1)Tn(a), Ty(e), Fo(\beta(x)), ...\diamond\}}{\{Tn(a), ..., Ty(e), Fo(\alpha(x) \wedge \beta(x)), ...\}\{(L \vee L^1)Tn(a), Ty(e), Fo(\beta(x)), ...\diamond\}}$$

Figure 10

$$\frac{\{Tn(a), ..., Ty(e), \langle\uparrow_0\downarrow_1\rangle Fo(\alpha(x)), ...\}\{(L \vee L^1)Tn(a), Ty(e), Fo(\beta(x)), ...\diamond\}}{\{Tn(a), ..., Ty(e), \langle\uparrow_0\downarrow_1\rangle Fo(\alpha(x) \wedge \beta(x)), ...\}\{(L \vee L^1)Tn(a), Ty(e), Fo(\beta(x)), ...\diamond\}}$$

Where $\alpha \cup \beta \subset \beta$

Figure 11

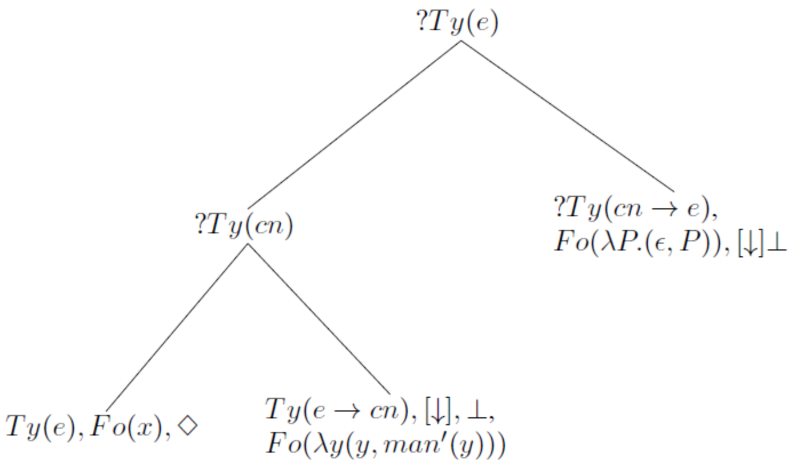

Figure 12

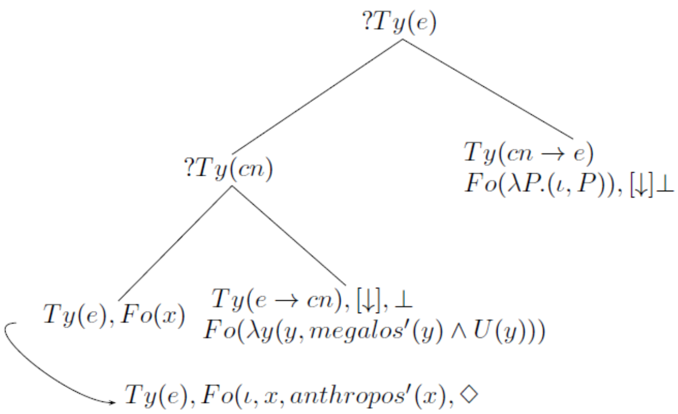

Figure 13

$$\frac{\{Tn(a), ..., Ty(e), \langle\uparrow_0^*\downarrow^*\rangle Fo(\alpha(x) \wedge U(x)), ...\}\{(L \vee L^1)Tn(a), Ty(e), Fo(\beta(x)), ...\Diamond\}}{\{Tn(a), ..., Ty(e), \langle\uparrow_0^*\downarrow^*\rangle Fo(\alpha(x) \wedge \beta(x)), ...\}\{(L \vee L^1)Tn(a), Ty(e), Fo(\beta(x)), ...\Diamond\}}$$

Where $\alpha \cup \beta \subset \beta$

Figure 14

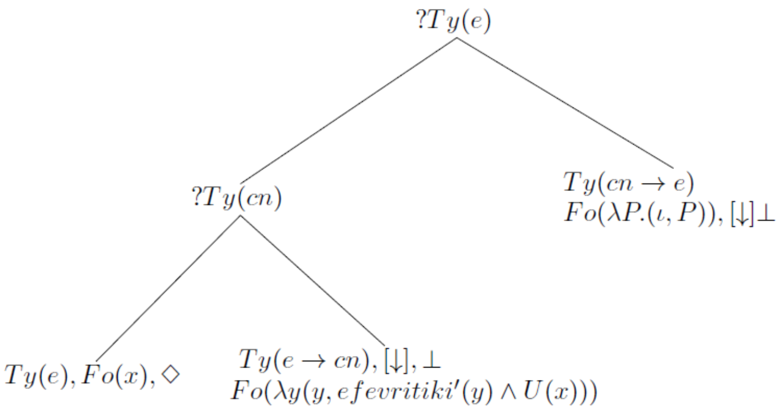

Figure 15

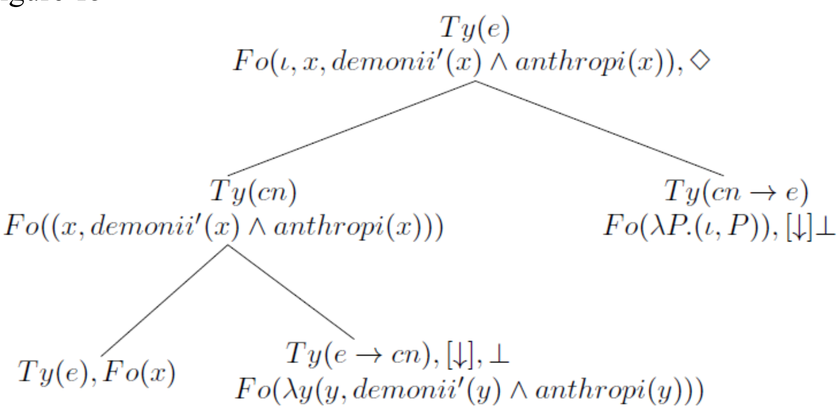

Figure 16

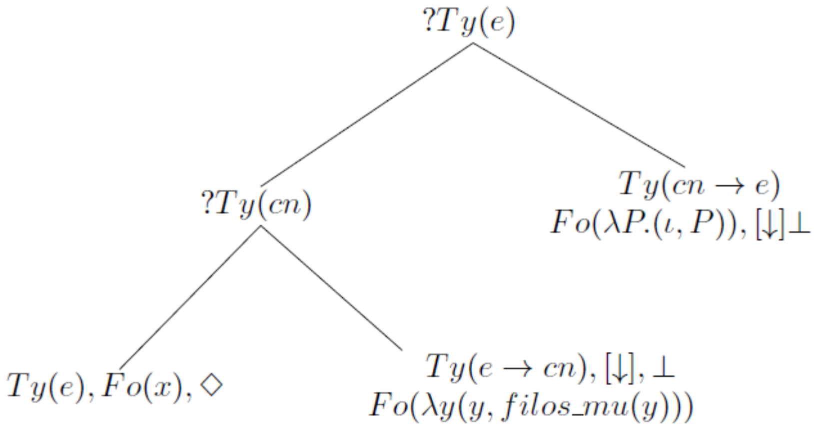

Figure 17

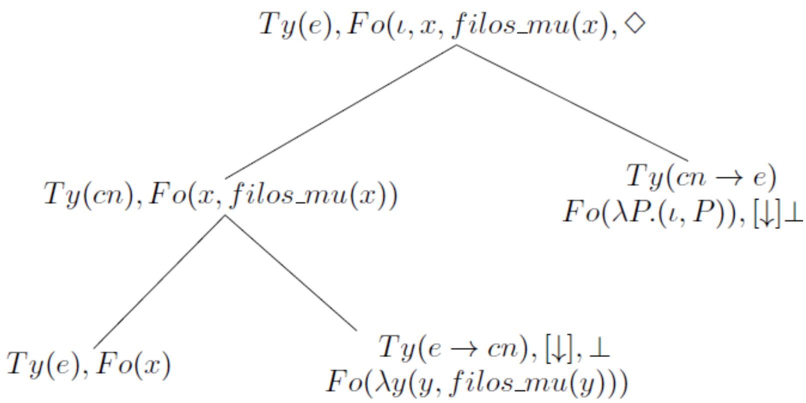

Figure 18

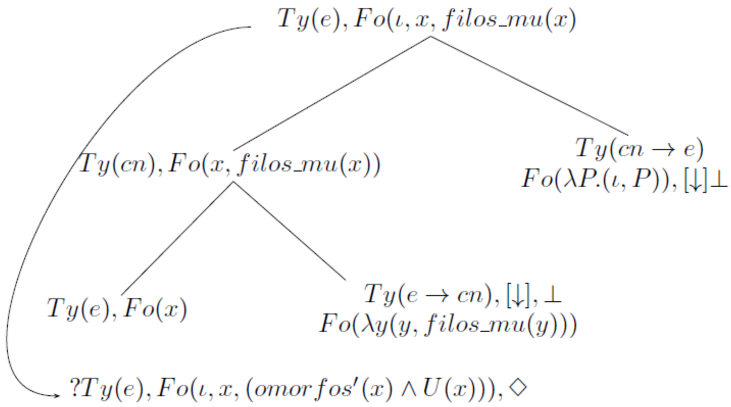

Figure 19

$$\frac{\{Tn(a), ..., Ty(e), \langle \uparrow_0^* \downarrow^* \rangle Fo(\alpha(x)[\wedge U(x))], ...\}\{(L \vee L^1)Tn(a), Ty(e), Fo(\beta(x)), ...\Diamond\}}{\{Tn(a), ..., Ty(e), \langle \uparrow_0^* \downarrow^* \rangle Fo(\alpha(x) \wedge \beta(x)), ...\}\{(L \vee L^1)Tn(a), Ty(e), Fo(\beta(x)), ...\Diamond\}}$$