SPATIAL AND DISCOURSE DEIXIS
AND THE SPEECH ACT STRUCTURE OF NOMINALS

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1.   Introduction

In this paper we investigate the relation between spatial and discourse deixis. We highlight how the assumption of a nominal speech act structure solves an analytical puzzle, which is raised by an empirical generalization firstly found in English and then corroborated by cross-linguistic variation.

Previous literature on deixis, especially Halliday and Hasan (1976:56-57; see also Diessel 1999:6) divide demonstratives into exophoric and endophoric. Exophoric demonstratives are used with reference to entities in the surrounding situation; endophoric demonstratives are subdivided into anaphoric, discourse deictic, and recognitional uses (Lyons 1977, Levinson 1983, Webber 1991, Fillmore 1997, Himmelmann 1996, 1997; see Diessel 1999 for an extensive crosslinguistic investigation of demonstratives). Anaphoric demonstratives are coreferential with an NP in the preceding discourse, discourse deictic demonstratives refer to propositions/illocutions, and recognitional demonstratives are not coreferential with an NP in the previous discourse and are used to activate specific shared knowledge between the speaker and the addressee within the discourse.

In this paper we focus only on the exophoric and the endophoric recognitional uses of demonstratives. We refer to exophoric uses of demonstratives as 'spatial demonstratives' or, more generally, 'spatial deixis' (e.g. *this* vs *that*), and to the endophoric recognitional uses as 'discourse demonstratives' or, more generally, 'discourse deixis'.

With this in mind, in this study we explore several related research questions: what is the relation between spatial and discourse deixis? Are there empirical generalizations to be made cross-linguistically? And, if this is the case, how can we account for all this formally? These are our research questions.

The paper is organized as follows. In section 2 we define our terminology and outline the puzzle based on English data. In section 3 we layout the nominal speech act structure and how the relation between spatial and discourse deixis can be modelled. In section 4 we propose that discourse deixis is recycled spatial deixis, and in section 5 we demonstrate how our empirical database supports that claim. Finally, in section 6 we conclude and illustrate avenues for future research.

2.   The puzzle

English has two forms for spatial deixis: *this* and *that*. *This* is the PROXIMAL SPATIAL demonstrative form (1a), *that* is the DISTAL SPATIAL demonstrative (1b). Specifically, a

PROXIMAL SPATIAL demonstrative like *this* in (1a) references an entity (*the book*) in the surrounding situation which is proximal to the speaker (and/or the addressee); in contrast a DISTAL SPATIAL demonstrative like *that* in (1b) references an entity (*the book*) in the surrounding situation which is distal from the speaker and the addressee.

Within discourse deixis (i.e. 'recognitional' uses), we distinguish DISCOURSE NOVEL demonstratives, as in (2a), from DISCOURSE FAMILIAR demonstratives, as in (2b):

(1)   Spatial deixis
    a.   **This** book (right here).   PROXIMAL
    b.   **That** book (over there).   DISTAL

(2)   Discourse deixis
    a.   **This** book (that I read…).   NOVEL
    b.   **That** book (we talked about…).   FAMILIAR

The DISCOURSE NOVEL demonstrative *this* in (2a) is referencing non-shared knowledge between the speaker and the addressee. Specifically, the speaker knows about the book s/he read but the addressee is not aware of it. The DISCOURSE FAMILIAR demonstrative *that* in (2b) is referencing shared knowledge between the speaker and the addressee, namely both of them know about the book they have talked about sometime in the past.

From the English data we can draw the generalization illustrated in Table 1. In English *this* can be used in both PROXIMAL SPATIAL and DISCOURSE NOVEL contexts. On the contrary, *that* functions as the SPATIAL DISTAL demonstrative and the FAMILIAR DISCOURSE demonstrative. This empirical observation seems to be surprising since we would intuitively expect that the PROXIMAL SPATIAL demonstrative *this* would be used in DISCOURSE FAMILIAR contexts in which the referent is shared knowledge between the speaker and the addressee (cf. 2b in which the speaker and the addressee refer to *the book* they have talked about before their present illocution). That is, we may have expected proximal demonstratives to refer to referents that are in the common ground, hence familiar. At the same time, we would have expected that the SPATIAL DISTAL demonstrative *that* would have been used in DISCOURSE NOVEL contexts in which the referent is not shared information between the speaker and the addressee but it is the speaker's sole knowledge.

Table 1. *Spatial and discourse deixis in English*

	Proximal	Novel	Distal	Familiar
English	*this*		*that*	

In what follows we show that the generalization found in English is neither surprising (i.e., there is a straightforward formal analysis assuming a nominal speech act structure) nor is it a coincidence (i.e., it is attested across a range of languages).

### 3.	A nominal speech act structure

The difference between spatial and discourse deixis has to do with whether we relate the individual we talk about to the world around us or to our mental worlds. One way to relate an individual to the world is by locating it in the space surrounding the discourse situation. This corresponds to the classic notion of deixis. However, when we relate individuals to our mental world, physical space is not available for reference. Instead, we relate these individuals to mental concepts surrounding the ongoing conversation. Whether or not an individual is known to discourse participants is one way to establish this relation. We can think of the common ground between the interlocutors as the mental space in which discourse referents can be situated. This can still be thought of as a form of deixis since reference is established relative to the immediate context, however, it also differs because this context can only be established via the minds of the interlocutors. It does not exist in the real world.

	We argue below, that this difference between spatial and discourse deixis is reflected in the way it is represented in the grammar. Specifically, we assume that spatial deixis is encoded in DP (cf. Bernstein 1997, Laenzlinger 2004; a.o.) . However, we propose that discourse deixis is encoded in functional architecture that dominates the DP structure, namely GroundP, as illustrated in (3):

(3)
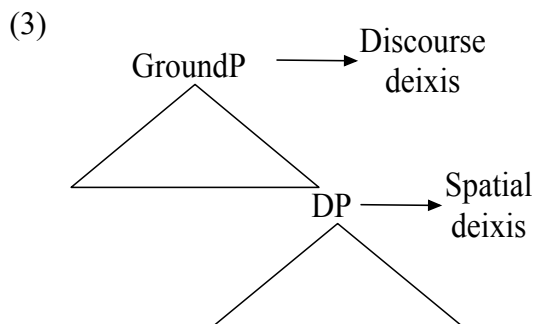
GroundP is a projection in a domain that is sometimes referred to as speech act structure. It has been proposed as a projection dominating root clauses (Wiltschko & Heim 2016, Wiltschko 2017), which encodes the speaker's attitudes towards the propositional content of the utterance. That is, it hosts units of language that encode, for example, whether the speaker believes the propositional content, whether the speaker thinks that the addressee believes it, but also how strong this belief may be (Yang & Wiltschko 2016), and whether the belief is new or old.

	Based on this work, Ritter & Wiltschko (2018) propose that GroundP is not restricted to the projection of clauses, but instead is also found in the nominal domain. This is in line with the wide-spread assumption that the functional architecture of nominal structure mirrors that of clausal structure. This leads to the immediate prediction that indeed DP is dominated by GroundP and that nominal GroundP will have similar functions (see Ritter & Wiltschko 2018, 2019 for details).

The discourse deixis introduced above is precisely the kind of function we might expect in this domain. That is, clausal grounding structure serves to encode the attitudes of the interlocutors towards the propositional content expressed: they relate propositions to mental states. And that's what discourse deixis does as well. GroundP dominating CPs relates propositions to the interlocutors' mental worlds, and above DPs it relates the referents to their mental worlds.

4. Discourse deixis as recycled spatial deixis

Following Ritter and Wiltschko (2019; §3.1), we claim that discourse deixis is recycled spatial deixis. More specifically, while the SPATIAL PROXIMAL demonstrative *this* is associated with the DP-structure, the DISCOURSE NOVEL demonstrative *this* is associated with GroundP$_{Spkr}$. Being associated with GroundP$_{Spkr}$ only, and not with GroundP$_{Adr}$ captures the fact that it does not refer to shared knowledge between the speaker and the addressee. Instead, it is the speaker's sole knowledge. On the other hand, the SPATIAL DISTAL demonstrative *that* is associated with the DP-structure, the DISCOURSE FAMILIAR demonstrative is associated with GroundP$_{Adr}$. This captures the fact that it refers to shared knowledge between both the speaker and the addressee. This is illustrated respectively in the trees in (4) and (5):

(4)
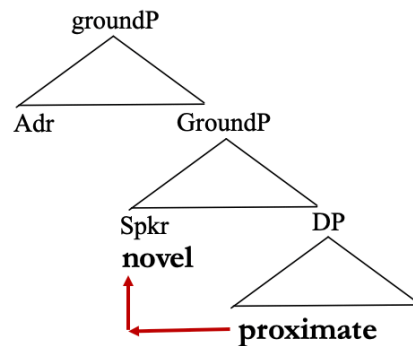
(5)
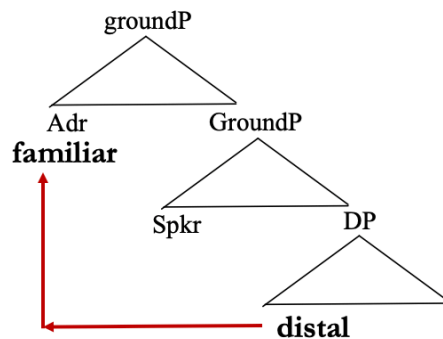
To sum up, this analysis formalises the relation between spatial and discourse deixis explaining the different functions (i.e. spatial and discourse) that the English demonstratives *this* and *that* can have. This can be viewed in terms of form-recycling in which the same demonstrative forms can be re-used in the speech act layer where their grammatical content is re-interpreted and, hence they fulfill a different function. The precise syntactic working of the recycling is left for future research.

5. The view from cross-linguistic variation

In order to check whether our preliminary generalization for English was just a coincidence or not, we collected data from different language families. Extending our empirical database enables us to put forward an initial typology of demonstrative systems, which solidly confirms our initial observation concerning the relationship between spatial and discourse deixis.

In the following sections we explain the fieldwork methodologies adopted and the different contexts investigated (§5.1). An initial typology of demonstrative systems will be put forward (§5.2) and, finally, other dimensions of variation concerning the relation between spatial and discourse deixis are discussed (§5.3).

5.1. Methodology

We investigated the relationship between spatial and discourse deixis making use of the storyboard elicitation technique by Burton & Matthewson (2015).[1] Concerning spatial deixis, we elicited distal and proximal demonstratives through six different storyboards. In the different contexts we used both animate and inanimate referents.[2] Concerning discourse deixis, we explored four contexts making use of four different storyboards. In what follows, all the contexts used for both spatial and discourse deixis are described.

5.1.1. Spatial deixis

The speaker proximal demonstrative form was investigated with the storyboard in (5), in which speaker A (short-haired woman) talking with the addressee B (short-haired guy) refers to the red-haired lady with the following sentence:

(5)   **This/*That** is Marica (red-haired lady).

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[1] We are grateful to Christina Lee who drew all of our story boards.
[2] For reasons of space we are describing only the contexts with animate referents.

The addressee proximal demonstrative has been elicited with the storyboard in (6). Speaker A (short-haired woman) is talking with addressee B (short-haired guy) and refers to the blond guy with the sentence in (6). Notice that in (6) both forms can be used in English, depending on the distance of the referent from both the addressee and the speaker. This is because English does not have a specific addressee proximal demonstrative.

(6)   **This/That** is Marco (blond guy).

Finally, the distal demonstrative has been elicited with the storyboard in (7). Speaker A (short-haired woman) is talking with addressee B (short-haired guy) and refers to the woman with the violet long dress, the referent, with the following sentence:

(7)   **That/*This** is Lucia (woman with the violet long dress).

Overall, proceeding with the elicitation of spatial demonstratives we realised that it is a complex phenomenon and it is not so straightforward as it seems. Specifically, we realised that a more careful investigation in different language families is needed and it should consider different perspectives, such as the visual vs. non visual characterization of the referent, the engagement of the interlocutors and the gestural component (mostly pointing). This is left for future research.

5.1.2. Discourse deixis

Concerning discourse deixis (or 'recognitional use'; see Diessel 1999:6), we explored four[3] different contexts (i.e., familiar, novel, emotional positive, and emotional negative) making use of four different storyboards.

Starting with what we call the DISCOURSE FAMILIAR context, the sentence in (8) is felicitous in a context in which the speaker and the addressee are talking about a wedding they attended two years before in which both noticed a beautiful woman in a yellow dress. In this specific context, both the speaker and the addressee are familiar with the referent, that woman in the yellow dress. Notice that in the context in (8) the speaker can refer to the referent only using the distal demonstrative *that*, whereas the proximal demonstrative *this* is ungrammatical.

(8)   Do you remember **that/*this** woman in the yellow dress?

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[3] For the moment only two of the four contexts (i.e. familiar and novel) will be described.
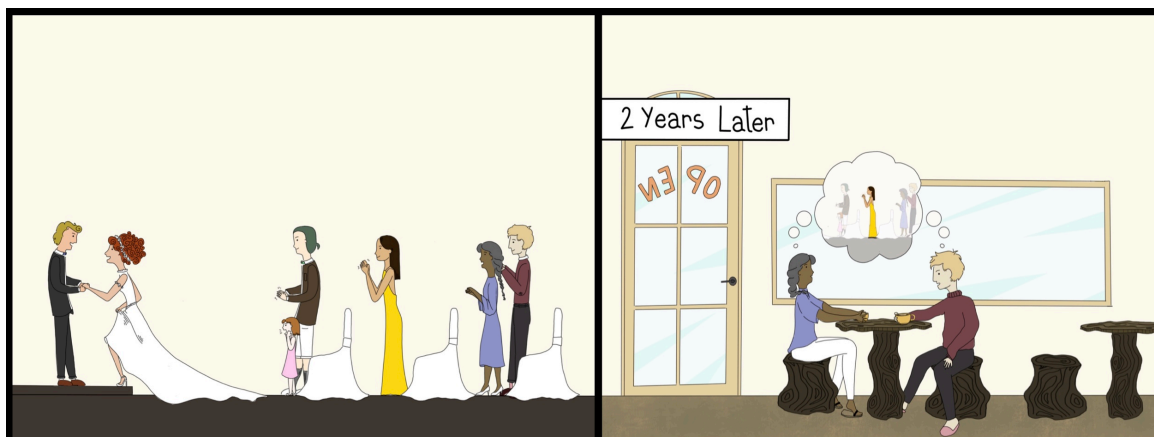
The context in (9) is what we call a DISCOURSE NOVEL context, in which the speaker and the addressee are married and looking for a name for their baby. So, the speaker (guy dressed in pink) remembers a hippie, named Woodstock, which he met at a festival in San Francisco before meeting his wife. So, in this context he suggests to call their baby after this hippie. In this context, where his wife is not familiar with the referent, the speaker can use the proximate but not the distal demonstrative.

(9)   I went to this festival in San Francisco and there was **this/*that** hippie… his name was Woodstock.

5.1.3. Summary

To sum up, through the five storyboards/contexts described above, we elicited spatial and discourse deixis in order to investigate their relation in different language families. We discovered that the initial generalization we made for English, namely that the proximal demonstrative *that* can be used for the DISCOURSE NOVEL contexts, and the distal

demonstrative *this* can be used for the DISCOURSE FAMILIAR contexts, it is not a coincidence as corroborated by evidence from cross-linguistic variation.

5.2. An initial typology of demonstrative systems

On the basis of the data investigated through the storyboards/contexts described in section §5.1, we propose an initial typology of demonstrative systems. Such typology is primarily concerned with the relationship between spatial and discourse deixis. However, the different demonstrative systems are distinguished on the basis of the number of demonstrative forms which the language has (i.e. 2-, 3-, 1, >3-way systems). The relation between spatial and discourse deixis will be described in terms of different patterns which the several languages investigated have to express the relationship between discourse and spatial deixis.

In the following sections, we are going to present 2-, 3-, 1-, and >3-way demonstrative systems, and the two different patterns which languages show to express the relationship between spatial and discourse deixis.

5.2.1. 2-way systems

2-way demonstrative systems are found in languages which have two demonstrative forms (e.g. *this* vs *that*), such as English, German, Dutch, Catalan, Romanian, and Mandarin (Table 2). In these systems there exist two patterns concerning the relationship between spatial and discourse deixis. The first pattern (i.e. Pattern 1; Table 2) is used by languages in which the proximal demonstrative (e.g. *this*) is used in DISCOURSE NOVEL contexts and the distal *that* is used in DISCOURSE FAMILIAR contexts. This pattern is found in English, German, Dutch, Catalan, and Romanian. The second pattern (i.e. Pattern 2; Table 2) is found in languages like Mandarin in which the distal demonstrative *na* is used in DISCOURSE FAMILIAR contexts but the proximal demonstrative *zhe* cannot be used in DISCOURSE NOVEL contexts. Instead in these languages we find an existential construction in this context (i.e. *It exists…, There is…*).

Table 2. *2-way demonstrative systems*

Pattern	Language	Proximal	Novel	Distal	Familiar
Pattern 1	English	*this*		*that*	
	German	*dieser*		*jene*	
	Dutch	*dit*		*dat*	
	Catalan	*aquest*		*aquel*	
	Romanian	*ăsta*		*ăla*	
Pattern 2	Mandarin	*zhe*	∃	*na*	

5.2.2. 3-way systems

3-way demonstrative systems are found in languages such as Castilian, Tuscan, southern Italian varieties (i.e. Barese, Verbicarese, and Cepranese), Tagalog, Korean, and Japanese. Concerning the relationship between spatial and discourse deixis, these systems show two different patterns. The first pattern (Pattern 1; Table 3) is found in Castilian, Tuscan, and southern Italian varieties, where the speaker proximal demonstrative is also used in DISCOURSE NOVEL contexts and the distal demonstrative is also used in DISCOURSE FAMILIAR contexts. The second pattern is found in Tagalog, Korean, and Japanese, in which the distal demonstrative is also used in DISCOURSE FAMILIAR contexts but the speaker proximal is not used in DISCOURSE NOVEL contexts. Similar to 2-way languages as Mandarin (see §5.2.1), 3-way languages such as Tagalog, Korean, and Japanese make use of an existential construction (i.e. *It exist…, There is…*).

Table 3. *3-way demonstrative systems*

Pattern	Languages	Proximal to Speaker	Novel	Proximal to Addressee[4]	Distal	Familiar
Pattern 1	Castilian	*este*		*ese*		*aquel*
	Tuscan	*questo*		*codesto*		*quello*
	Barese	*kèss*		*kùss*		*kèdd*
	Verbicarese	*quistə*		*quissə*		*quiddə*
	Cepranese	*kiʃtə*		*kissə*		*kigliə*
Pattern 2	Tagalog	*ito*	∃	*yan*		*yun*
	Korean	*i*	∃	*ku*		*ce*
	Japanese	*ko*	∃	*so*		*a*

5.2.3. 1-way systems

1-way systems are found in languages such as French and Swabian (Southern German; Table 4). Pattern 1 is found in French, in which spatial proximal and distal demonstratives are formed with the demonstrative *ce* plus a locative element (e.g. *-ci, -là*). Only the demonstrative *ce* without the locative element is used in both DISCOURSE NOVEL and DISCOURSE FAMILIAR contexts. Pattern 2 is found in Swabian, in which spatial proximal and distal demonstratives are formed with a determiner plus a locative element (e.g. *do, do driaba*). However, in Swabian only the determiner can be used in DISCOURSE FAMILIAR contexts but it cannot be used in DISCOURSE NOVEL contexts. Like 2-way languages such as Mandarin and 3-way languages such as Tagalog, Japanese, and Korean, also Swabian

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[4] For reasons of space we are leaving out the discussion and the findings about the addressee oriented spatial demonstrative and its relationship with discourse deixis in 3-way systems.

has to use an existential construction (e.g. *It exists…, There is…*) in DISCOURSE NOVEL contexts.

Table 4. *1-way demonstrative systems*

Pattern	Language	Proximal	Novel	Distal	Familiar
Pattern 1	French	*ce+ci*	*ce*	*ce+là*	*ce*
Pattern 2	Swabian	*dea+do*	∃	*dea+do driaba*	*det*

5.2.4.   >3-way systems

Systems which present more than three demonstrative forms, such as Ktunaxa (language isolate traditionally spoken in Southern Interior British Columbia; see Huijsmans & Birdstone 2019). Ktunaxa presents the speaker proximal demonstrative *naʔ*, the addressee proximal demonstrative *ʔin*, and the distal demonstrative *qu*. Concerning discourse deixis, Ktunaxa presents the demonstrative *niʔ*, which is only used in DISCOURSE FAMILIAR contexts in which the referent is not visible to the speaker and the addressee. Like 2-way languages such as Mandarin, 3-way languages such as Tagalog, Japanese, and Korean, and 1-way languages such as Swabian, Ktunaxa also uses an existential construction (e.g. *It exists, There are…*) in the DISCOURSE NOVEL context. The Ktunaxa facts are summarised in Table 5 below.

Table 5. *>3-way demonstrative systems*

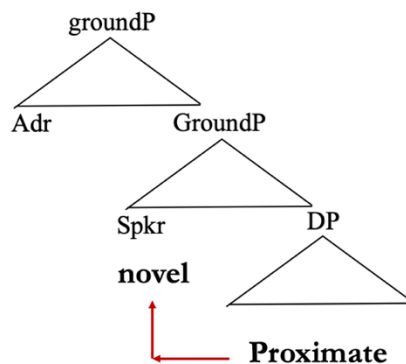| Language	Proximal to Speaker	Novel	Proximal to Addressee	Distal	Familiar
Ktunaxa	*naʔ*	∃	*ʔin*	*qu*	*niʔ* (not visible)

5.3.   Three formal 'recycling' strategies

In what follows we account for the different demonstrative systems and patterns described in §5.2 proposing three relative formal recycling strategies following from our analysis proposed in §4. Specifically, we claim that patterns found in our database of languages investigated correspond to three different kind of strategies of recycling: full, partial and no recycling. Taking into account a nominal speech act structure we can then formalise the cross-linguistic variation found in the relationship between spatial and discourse deixis.
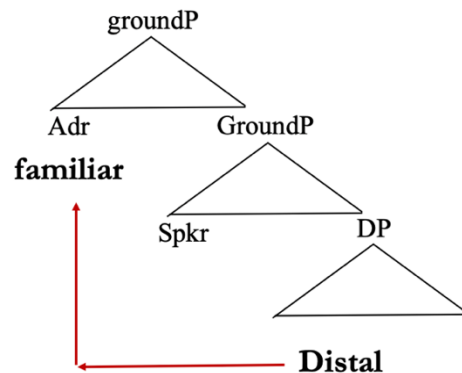
5.3.1. Full recycling

On the basis of the analysis proposed for English in §4, a full recycling of spatial deixis is found in 2-way demonstrative system languages (i.e. English, German, Dutch, Catalan, and Romanian; Table 2), 3-way demonstrative system languages system (i.e. Castilian, Tuscan, and southern Italian varieties; Table 3), and 1-way demonstrative systems languages (e.g. French; Table 4) which present Pattern 1. Basically, in all these languages discourse deixis is fully recycled spatial deixis: the proximal demonstrative is recycled in GroundP$_{Spkr}$ in DISCOURSE NOVEL contexts as shown in (10) and in DISCOURSE FAMILIAR contexts the distal demonstrative is recycled in the GroundP$_{Adr}$ as shown in (11).

(10)

groundP
Adr   GroundP
     Spkr   DP
     novel
               Proximate

(11)

groundP
Adr   GroundP
familiar
          Spkr   DP

               Distal

5.3.2. Partial recycling

Following our analysis in §4, partial recycling of spatial deixis into discourse deixis is found in languages with 2-way demonstrative systems (i.e. Mandarin; Table 2), 3-way demonstrative systems (i.e. Tagalog, Korean, and Japanese; Table 3), and 1-way demonstrative systems (i.e. Swabian) which show Pattern 2. While in these languages the distal demonstrative is recycled in DISCOURSE FAMILIAR contexts (see 11), the proximal demonstrative is not recycled in DISCOURSE NOVEL contexts (cf. 10). In all these languages only the recycling shown in the tree in (11) is possible, namely in DISCOURSE FAMILIAR

contexts the distal demonstrative is recycled in the GroundP$_{Adr}$. Hence, in all these languages we only have a partial recycling of spatial deixis into discourse deixis.

5.3.3. No recycling

In the >3-way demonstrative system found in languages such as Ktunaxa (see Table 5) we claim that no formal recycling of spatial deixis is possible. In this language, we found three spatial demonstratives (i.e. speaker proximal, addressee proximal, and distal) and one discourse demonstrative found only in DISCOURSE FAMILIAR contexts in which the animate or inanimate referent is not visible by the speaker and the addressee. Hence, in Ktunaxa the DISCOURSE FAMILIAR demonstrative *niʔ* is lexicalised in the nominal speech act structure and the spatial demonstratives are lexicalised lower down in the DP, as shown in (12).

(12)
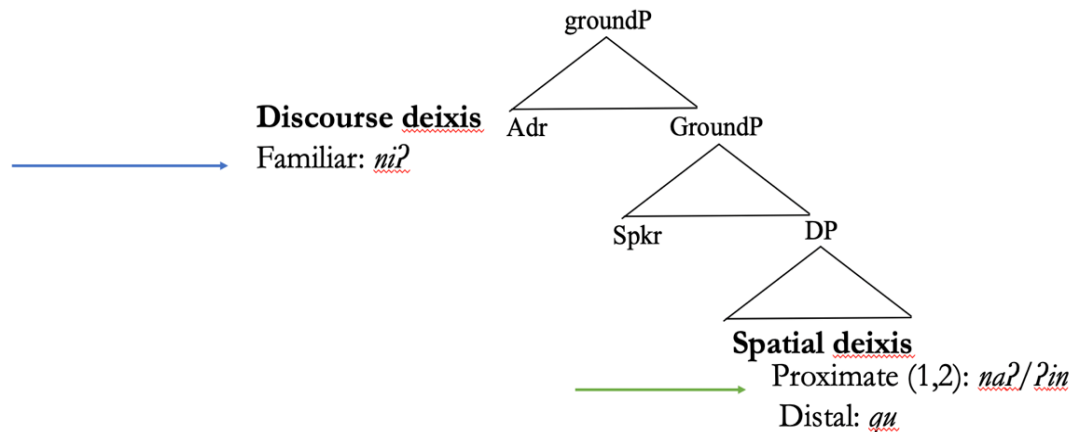
6. Conclusions and future research

In this paper we investigated the relation between spatial and discourse deixis and how it can be modelled by using a nominal speech act structure. Our principal claim, namely that discourse deixis is recycled spatial deixis, is strongly supported by cross-linguistic evidence from different language families.

To be left for future research are a more extensive cross-linguistic empirical base and several other types of demonstrative uses. Concerning the empirical base, a wider range of data from different languages is needed as we are aware of the existence of different demonstrative systems (see for example the extensive cross-linguistic investigation by Himmelmann 1997; a.o.). With regard to several other demonstrative uses, an investigation of other endophoric demonstratives (i.e., anaphoric and discourse deictic demonstratives) is needed. Our paper presents the first step towards a formal typology of the relation between spatial and discourse deixis.

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