

Dutch spatial case

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Abstract

This paper argues that Dutch has spatial case in the form of r-pronouns. The use of these pronouns is rather restricted, which explains the fact that they have not been recognized as spatial case markers before. The restricted use in Dutch is due to two simultaneously applying principles that are cross-linguistically validated. First, case can be used on constituents whose syntactic function can not be told from structural position. Second, infelicitous combinations of humans with spatial forms can be avoided. The findings reported in this paper may necessitate a rethinking of what exactly (spatial) case is.

1 Introduction

In this paper, I propose that Dutch has spatial case. At first sight this may be unexpected for such a poor case language. As I will first show, however, spatial case is more basic than generally thought.

Spatial case is the use of morphological case to express spatial meaning. For example, in Hungarian the position of the speaker *inside of* and *on* the house are expressed with the case suffixes *-ban* and *-on*, as illustrated in (1). Such distinctions in relative position are called *configuration distinctions*.

Hungarian (Uralic)

- (1) a. *A ház-ban állok.*
the house-INE stand.1SG
'I'm standing in the house.'
- b. *A ház-on állok.*
the house-SUPER stand.1SG
'I'm standing on the house.'

The use of spatial case to express configuration distinctions is restricted to languages with very rich case inventories. Spatial case first always specifies *directionality*, the change of relative position over time (Lestrade, Sander

2010). This is illustrated in (2).

Hungarian (Uralic)

- (2) a. *A ház-ban állok.*
the house-INE stand.1 SG
'I'm standing in the house.'
- b. *A ház-ba megyek.*
the house-ILL go.1 SG
'I'm going into the house.'
- c. *A ház-ból megyek.*
the house-ELA go.1 SG
'I'm going out of the house.'

In (2a), there is no change of configuration (*Place*); in (2b), the speaker first was outside of the house but now is inside (*Goal*), and in (2c), she first was inside and now is outside of it (*Source*). Only if spatial case distinguishes between these directionality distinctions, a further distinction between configurations like in (1) is expected in the case paradigm of a language (Stolz, Thomas 1992; Creissels, Denis 2009; Lestrade, Sander 2010).

The most basic function of spatial case, however, is not to make distinctions in directionality or configuration whatsoever but only to mark something as a *ground*, a stable reference object that is used to locate something else (Talmy, Leonard 1975, 2000). This is illustrated in the following examples of Tswana.

Tswana (Niger-Congo; Creissels, Denis 2006: 23)

- (3) a. *Monna o dule motse-ng.*
iman S3:1 leave.PFT 3village-LOC
'The man left the village.'
- b. *Monna o ile noke-ng.*
iman S3:1 go.PFT 9river-LOC
'The man went to the river.'

In principle, the spatial marker *-ng* only marks the village as the ground. Depending on the context, the marker can have Place, Goal, or Source meaning. Place is the default interpretation, the other two directionalities follow from the verb semantics. In (3a), the marker is combined with a verb of leaving resulting in Source directionality; in (3b), it combines with a destination verb to express Goal directionality (Creissels, Denis 2006: 23). Note that, like in the English translations, there is no specification of configuration whatsoever. The interpretation of configuration, i.e., the choice between AT, IN, UNDER, etc., straightforwardly follows from world knowledge.

Thus, an implicational hierarchy of spatial meaning distinctions made by

spatial case emerges. Spatial case systems start out with a general locative case that marks a ground function and that is underspecified with respect to both directionality and configuration. Next, a distinction is made between the basic categories of directionality (Place, Goal, and Source). Subsequently, basic configuration distinctions (like AT vs. IN) and/or more fine-grained directionality distinctions (adding e.g. TOWARD and UP TO) can be made (see again Stolz, Thomas 1992; Creissels, Denis 2009; Lestrade, Sander 2010).

I will argue that so-called *r-pronouns* in Dutch like *er* ‘there’, *waar* ‘where’, and *nergens* ‘nowhere’, should be analyzed as spatial case markers that express the most basic spatial meaning, i.e. the ground function.¹ The fact that this claim has not been made before is probably because these r-forms are generally only recognized as prepositional complements. In this function, they have a very restricted usage. Consider the following example.

- (4) *Waar gaat het eigenlijk over?*
 where goes it really about
 ‘What is it about?’

The use of r-forms as prepositional complements, illustrated with *waar* ‘where’ in (4), is limited to nonhuman referents of stranded prepositions (see van Riemsdijk, Henk 1978). A stranded construction is not possible for prepositional complements with a human referent, and prepositional complements that directly follow their preposition do not have an r-form. It is of course imaginable that one does not immediately think of these forms as case markers if their use indeed was so restricted.

But the use of r-forms is not restricted to P stranding constructions. R-forms also have adverbial uses, like those in (5). Note that, unlike in the previous example, they clearly express general spatial meaning here.

- (5) a. *Ik weet niet waar ik mijn pen heb gelaten.*
 I know not where I my pencil have left
 ‘I don’t know where I left my pencil.’
 b. *Ik heb overal gekeken.*
 I have everywhere looked
 ‘I looked everywhere.’

In my analysis, (4) and (5) illustrate two different uses of a spatial case form. That is, it is not coincidental that the same form is used in adverbial and P stranding constructions, and we should not restrict our definition of r-forms to the latter context only. Moreover, I will show that structural and semantic restrictions comparable to the ones mentioned above are not at all uncommon for case in other languages.

¹The label *r-pronouns* is motivated by the shared *r* sound that distinguishes them from other pronouns.

In the next section, I will first argue for an analysis of pronominal forms in terms of case. If one does not accept such an analysis, there is no case paradigm in Dutch to extend to begin with.

2 Forms of Case

According to Blake, Barry J. (1994), case is realized via case forms and case markers. A case marker is an affix (a suffix, mostly) that can be separated from a stem, a case form is a complete word. The function of case forms and markers is to mark dependent nouns for the type of relationships they bear to their heads (Blake, Barry J. 1994: 1). In this view, different pronominal forms in languages like English and Dutch are indeed case forms. As illustrated in (6), the different forms of the third person singular pronoun mark it as either a subject or an object:

- (6) a. *Hij heeft Sjarai gezien.*
3.SG.NOM has Sjarai seen
'He saw Sjarai.'
- b. *Sjarai heeft hem gezien.*
Sjarai has him.SG.ACC seen
'Sjarai saw him.'

Not all linguists accept this distinction between case forms and case markers and analyze the different pronominal forms as case phenomena. Hudson, Richard (1995) argues that English does not have case at all. He has four objections to a case analysis of pronominal forms. First, the distinction is only manifest in five personal pronouns (*me, him, her, us, them* and *who*) and therefore it is not productive. Second, the already marginal distinction is even further reduced in some nonstandard dialects of English. Third, the distribution of subject forms follows a different pattern from that in "normal" languages with morphological case. This is illustrated with a coordination example from the Corpus of London Teenager Language:

- (7) *Yeah but me and Catherine really don't talk about you know*

In (7) *me* is the subject of a tensed verb. The same speaker uses *I* for an uncoordinated subject:

- (8) *Well what have I said about you then?...*

According to Hudson, coordination is generally transparent to case requirements, and languages use the same form for the subject of a tensed verb whether it is coordinated (7) or not (8). Therefore, if *me* was a case form in (7), it should have been *I*. A possible explanation by Emonds, Joseph (1976,

1985: cited in Hudson) is that *I* is only allowed when immediately dominated or when immediately followed by the inflected verb. However, as Hudson notes, this cannot explain examples like (9) where *I* is separated from the verb or placed after it:

- (9) a. *I always pay my debts.*
b. *Have I offended you?*

Whatever the explanation may be, Hudson argues, to assume that the restriction on the use of *I* is a matter of case will not help, as coordination in other languages does not impose case restrictions.

The fourth objection of Hudson is under the assumption of abstract case. If there is a distinction between morphological case and abstract case, abstract case may or may not be realized by morphological case, but morphological case is always the realization of abstract case. If *I* is the morphological realization of subject abstract case and *me* of object abstract case, and in general English coordinate sentences are transparent to externally imposed constraints, as illustrated for the gerund in (10), then speakers are expected to use *I* and not *me* for all subjects (which they don't, as was illustrated in (7) above).

- (10) a. *He keeps on talking/*talk.*
b. *He keeps on talking/talk and waving/*wave his hands.*

So, why do I follow Blake, Barry J. (1994), and not Hudson, Richard (1995), in saying that pronominal forms are instances of case? The first two objections need not be a problem for analyzing pronominal forms as case forms. Cross-linguistically, pronouns often behave differently from full NPs with respect to case, as Iggesen, Oliver A. (2009) shows. I think the answer to the last two objections can be captured in terms of *default case*, that is, the case form that is used if no specific form is called for. As Hudson himself acknowledges in a footnote, it is true that in some languages only one of the coordinated NPs has the "expected" case. Now, if accusative is the default case in English (as argued for by Schütze, Carson T. 1997) and the nominative case that is assigned by the verb is only assigned to the second member of the coordinated subject (as Hudson says to be possible), then it indeed should be possible to find accusative case on the first member of the coordinate subject.

In conclusion, Hudson, Richard (1995) does not think case forms are cases because of the absence of productivity and the distribution of subject forms in coordination. But cross-linguistically, the use of case is often restricted to pronouns (Iggesen, Oliver A. 2009) and the distribution of subject forms can be explained by assuming that accusative is the default case in English (Schütze, Carson T. 1997). Since pronominal forms function as prototypical case markers, *viz.* distinguishing between subject and object, pronominal

forms can and should be analyzed as case forms.

3 Dutch R-Forms

Also in Dutch, morphological case is realized as a case form and is restricted to the pronominal domain. The Dutch system makes a distinction between nominative, genitive, dative, and accusative case, as listed in Table 1.

Table 1: Case forms in Dutch

	nominative	genitive	accusative	dative
1SG	ik	mijn	mij	mij
2SG	jij	jouw	jou	jou
3SG.M	hij	zijn	hem	hem
3SG.F	zij	haar	haar	haar
3SG.NONH	het	zijn	het	het
1PL	wij	onze	ons	ons
2PL	jullie	jullie	jullie	jullie
3PL	zij	hun	hen/hun	hun

The prescriptive grammar of Dutch distinguishes a special form *hen* for the third person plural accusative and thus makes a distinction between accusative and dative case. Generally, however, only *hun* is used and the two cases are really one. (Cf. van Bergen, Geertje and Stoop, Wessel and Vogels, Jorrig and de Hoop, Helen in press: for the additional nominative use of *hun* as an alternative for *zij*, to distinguish between animate and inanimate referents.)

As said above, I will argue for another case distinction, one that should be made and that is not yet listed in Table 1. I think room should be made for spatial case, expressed by r-forms. The logic of my argument is simple. If r-forms are pronouns and if pronominal forms are case forms, r-forms are cases too and the case paradigm of Dutch should be extended accordingly. This extension is in terms of spatial case, as the semantic use of these forms is to express spatial meaning (cf. again (5)). Having established that pronouns are case forms in the previous section, I will now argue that r-forms are pronouns indeed.

According to a naive definition (or literal translation), pronouns come instead of full noun phrases (see Bhat, Darbhe N.S. 2004: 1). Often however, and as was shown by the contrast between *hij* ‘he’ and *hem* ‘him’ above already, pronouns additionally mark grammatical function by virtue of their being case forms. This is an important observation that opens up the possibility of analyzing r-forms as pronouns. First, consider the following mini-discourse:

- (11) a. *Een man ziet een vrouw.*
 a man sees a woman
 ‘A man sees a woman.’
- b. *Ze kijkt boos.*
 3.SG.NOM.RED looks angry
 ‘she is looking angry.’
- c. *Haar zegt de man liever geen gedag.*
 3.SG.ACC says the man rather not good.day
 ‘The man prefers not to say hello to her.’

Dutch has several different strategies to mark argument structure that are simultaneously active (see de Hoop, Helen and Lamers, Monique 2006). In (11a), in the absence of prominence, case marking, and agreement information, word order distinguishes between subject and object. In (11b), the pronoun *ze* replaces the full DP *een vrouw* ‘een vrouw’. Together with word order and agreement, the nominative case form marks her as the subject of the clause. In (11c), *een vrouw* is again replaced by a pronoun. This time however, it is very clear that the pronoun not only replaces the determiner phrase but in addition marks syntactic function. It is only the case form that informs about argument structure in (11c).

In principle, prepositions too mark syntactic functions. For example in (12), the preposition *aan* ‘to’ marks *de kinderen* ‘the children’ as the indirect object. As illustrated in (12)’, a pronoun can again substitute for the DP and inform about its function.²

- (12) *Ik gaf het boek aan de kinderen.*
 I gave the book aan the children
 ‘I gave the book to the children.’
- (12)’ *Ik gaf het hun.*
 I gave 3.SG.NOM/ACC.(INAN) 3.PL.DAT.(ANIM)
 ‘I gave it to them.’

The pronoun *hun* (at least according to reference grammar, see Table 1) is the dative case form of the third person plural pronoun. It replaces the DP *de kinderen* ‘the children’ and in addition expresses the indirect object function for which the preposition *aan* ‘to’ was used in (12).

In languages with sufficiently large adpositional inventories, adpositions generally add a semantic dimension to the syntactic function. Spatial adpositions for example do not only mark an oblique (spatial) status but specify functional and geometrical details of this relationship in addition. For example, the preposition *in* ‘in’ in (13a) marks *de winkel* ‘the shop’ as an oblique

²If nothing hinges on the details, I will simply use the English pronoun equivalents in the glossing from now.

argument, *viz.* the location of the walking event. But in addition, it specifies that this event took place within the boundaries set by the shop building. In this additional semantic function, it contrasts with other prepositions like for example *op* ‘on’ or *bij* ‘at’ that are otherwise the same in marking an oblique status. As (13b) shows, r-forms only mark the oblique spatial function of the DPs that they replace. The semantic detail that can be reached by the contrastive use of spatial prepositions is lost in the pronominal expression. R-forms only mark the most general spatial function and do not make configuration or directionality distinctions.

- (13) a. *Bram liep rond in de winkel.*
 Bram walked around in the shop
 ‘Bram_i walked around in the shop_j.’
 b. *Hij kocht er een boek.*
 he bought 3.SPATIAL(.INAN) a book
 ‘He_i bought a book there_j.’

The r-form *er* ‘there’ in (13b) replaces the DP *de winkel* ‘the shop’ in the continuation of the discourse and marks it as a location. As such, it does the very same thing as the (other) pronouns *hun*, *haar*, and *zij* in the examples above. It comes instead of a DP and marks its function in the clause by virtue of its case form. Alternatively, our little discourse could have continued with (13b’). The DP *de winkel* ‘the shop’ is again referred to by a pronoun, but this time it functions as a subject. Together with the syntactic function of the pronoun its form changes, just like we have seen for personal pronouns in (6).

- (13) b’ *Het_j was het lelijkste gebouw dat hij*
 3.SG.NOM/ACC(.INAN) was the ugliest building that he
ooit had gezien.
 ever had seen
 ‘It was the ugliest building he had ever seen.’

In (14) another example is given of the similarity between r-forms and what are traditionally recognized as pronouns.

- (14) a. *Niels woont in Amsterdam.*
 Niels lives in Amsterdam
 ‘Niels is living in Amsterdam_j.’
 b. *Hij woont daar al jaren*
 he lives 3.SPATIAL(.INAN) already years
 ‘He has been living there_j for years’
 c. *en vindt het de leukste stad van*
 and thinks 3.SG.NOM/ACC(.INAN) the nicest city of

Nederland.

the.Netherlands

‘and (he) thinks it_j is the nicest city of the Netherlands.’

Both *daar* ‘there’ in (14b) and *het* ‘it’ in (14c) refer to Amsterdam in (14a). The form of the pronoun depends on the function it has in the sentence. The latter case form is used for the object function, the former for the spatial function. Now, if the pronominal status of *het* ‘it’ in the above examples is uncontroversial, there should be no reason to deny a similar analysis for r-forms like *er* ‘there’ and *daar*.

Interestingly, the use of the spatial pronoun is not as straightforward as one might expect on the basis of the above examples. In the examples given above, r-forms express a semantic function, *viz.* a spatial relation. However, like most case forms, r-forms have purely syntactic functions too. Consider (15b), in which *daar* ‘there’ substitutes for *de hamer* ‘the hammer’.

- (15) a. *Jan zocht zijn hamer.*
John searched his hammer
‘John was looking for his hammer_i.’
b. *Hij wilde daar zijn tafel mee repareren.*
he wanted 3.SPATIAL(.INAN) his table with fix
‘He wanted to fix his table with it_i.’

In spite of its spatial form, *daar* does not express a spatial meaning in (15b). In fact, *daar* ‘there’ is the complement of the stranded preposition *mee* ‘with’ that expresses an instrument relation. As we argue in Lestrade, Sander and de Schepper, Kees and Westelaken, Steven and de Hoop, Helen (2010), the r-form in these constructions is used to mark the basically spatial relation between the complement and its governing P (that may express non-spatial meaning too, as exemplified in (15)). Because of economy reasons, this marking only takes place if the syntactic relationship between P and complement is not clear from word order. Indeed, if the pronominal complement immediately followed the preposition, it would take up a nonspatial form, as illustrated in (15b’).

- (15) b’ %*Hij wilde met die zijn tafel*
he wanted with 3.SG.NOM/ACC.(INAN) his table
repareren.
fix
‘He wanted to fix his table with it_i.’

For most Dutch speakers, the scrambling of pronominal forms is obligatory and the unscrambled version ungrammatical, hence the percentage sign in (15b’). Scrambling is however grammatical without doubt for quantifier pro-

nouns, as illustrated in (16). The meaning of the two options is exactly the same. The r-form *ergens* ‘somewhere’ in (16)’ is the spatial case form of *iets* ‘something’ in (16) and is used in the scrambled construction only.

(16) *Ik ben over iets aan het nadenken.*
 I am over something at the think
 ‘I am thinking about something.’

(16)’ *Ik ben ergens over aan het nadenken.*
 I am somewhere over at the think
 ‘I am thinking about something.’

Again, if word order is sufficient to understand the relation between the complement *iets/ergens* ‘something’ and the P *over* ‘about’, the non-spatial pronominal form is used, as in (16). If the complement appears in a non-standard position however, a spatial case is deemed necessary to establish the relation with its governing P, as illustrated in (16)’.

This economical use of case will be discussed more elaborately from a typological perspective in the next section. First however, consider another restriction on the use of r-forms. R-forms are not allowed for human or animate referents, as illustrated in (17).

(17) *Deze film is niet voor iedereen geschikt.*
 this film is not for everyone suitable
 ‘This film is not fit for everyone.’

(17)’ *#Deze film is niet overal voor geschikt.*
 this film is not everywhere for suitable
 Intended: ‘This film is not fit for everyone.’
 (OK for: ‘This film is not fit for *everything*.’)

As (17)’ shows, the r-form *overal* cannot be used to refer to animates. As I will show in Section 5, comparable restrictions on the combinatorial possibilities of spatial forms are commonly attested in languages of the world.

In conclusion to this section, I have argued that r-forms are pronouns whose primary use is to express spatial meaning. R-forms perform exactly the same function as traditionally recognized pronouns like for example *hij* ‘he’, *haar* ‘her’, and *het* ‘it’. Pronouns are used instead of a full DP and, if the language system permits, mark syntactic function by means of their case form. Since we have seen in the previous section that pronominal forms are case forms, Dutch has spatial case.

In the next sections, I will explain the restricted use of Dutch r-forms from a cross-linguistic perspective. I will show that comparable structural and semantic restrictions are not at all uncommon for morphological case in languages of the world. In Dutch, both simply apply to spatial case simultane-

ously.

4 Case and Position

In some languages, case is only used when necessary. That is, only when the speaker thinks the hearer will not get the right interpretation otherwise, she will use case marking. If the speaker thinks the hearer can do with other structural or semantic clues, she will use a more economical form omitting case (cf. de Swart, Peter 2007; Lestrade, Sander 2010). This procedure is fairly well-known for the differential use of case in which animacy information is used, illustrated in (18).

Fore (Trans-New Guinea; Scott, Graham 1978: 115-116)

- (18) a. *Yaga: wá aegúye.*
pig man 3SG.OBJ.hit.3SG.S.IND
'The man kills the pig.' not: 'The pig attacks the man.'
- b. *Yaga:-wama wá aegúye.*
pig-ERG man 3SG.OBJ.hit.3SG.S.IND
'The pig attacks the man.' not: 'The man kills the pig.'

The standard division of roles between men and pigs in an attacking/killing event is such that the man is doing something to the pig. If the division of roles in an actual situation follows the prototype, it does not need explicit marking (18a). If, however, the argument structure is unexpected, it needs to be marked to overrule the default interpretation, as (18b) shows.

Thus, the production of a sentence is constrained by its interpretation. The speaker checks if the preferred form candidate from her speaker perspective will indeed lead to the right interpretation. If not, she resorts to a suboptimal form that she thinks will get the meaning across. And thus, morphological case is used here as an optional device if communication otherwise fails. If the speaker thinks semantic animacy clues are sufficient to determine the function of an argument, she will not use case. (See de Swart, Peter 2007, in press; Lestrade, Sander 2010 for a formalization of this idea in OT.)

As said above, however, the selection criteria of the verb and the animacy of the referent are not the only clues available to the hearer. The use of case can also be sensitive to its (structural) position. Although this phenomenon has been described for individual languages, as far as I know, it has never been connected to other instances of differential case marking, with the notable exception of Yang, Ning and van Bergen, Geertje (2007) and van Bergen, Geertje (2006).

Yang, Ning and van Bergen, Geertje (2007) show that in Mandarin Chinese scrambled objects in principle are marked with *ba*. Mandarin Chinese

has an SVO basic word order. When the word order changes to SOV because of scrambling, the argument functions can no longer be told from the relative position with respect to the verb and *ba* is used to distinguish subjects from objects. Definiteness and animacy are independently of influence on DCM on scrambled objects. First, the marker can be dropped if the argument functions can be told from the animacy of the referents. Independently from this animacy principle, lexically indefinite NPs in preverbal position are obligatory marked with *ba*. The case marker is used to license indefinite objects to occur in the preverbal position that otherwise renders a specific and definite reading for its filler.

These two principles explain variation in case marking that is otherwise incomprehensible. Consider the following example:

Mandarin Chinese (Sino-Tibetan; Yang, Ning and van Bergen, Geertje 2007: 1630)

- (19) *Ta *(ba) zhe-tiao she dasi le.*
He BA this-CL snake hit.dead PRT
'He killed this snake.'

Although the scrambled object meets the prominence requirements of the topic position (because of which *ba* does not have to be used), it is animate, making case marking obligatory. Now consider Example (20).

- (20) *Ta *(ba) yi-ge pingguo chi le.*
He BA one-CL apple eat PRT
'He ate an apple.'

Although this time the scrambled object is inanimate (because of which *ba* does not have to be used), it does not meet the prominence requirements of the topic position, making case marking obligatory again. Finally consider example (21).

- (21) *Ta (ba) na-ge pingguo chi le.*
He BA that-CL apple eat PRT
'He ate that apple.'

Because the scrambled object is inanimate, *ba* does not have to be used to distinguish the subject from the object. Also, because the scrambled object meets the prominence requirements of the topic position, *ba* is unnecessary. Nevertheless, because the object has scrambled, *ba* is optional.

Yang, Ning and van Bergen, Geertje (2007) conclude that to understand differential case marking in Chinese, one need to take into consideration syntactic position as well. In postverbal position, *ba* is never used. In preverbal position, its use depends on the semantic and discourse properties of the ref-

erent.

Note that the motivation to use case here is really the same as we saw previously. If other clues than case marking, be it word order or animacy, can be used to determine the meaning of an utterance, the speaker can omit case. In the remainder of this section, I will discuss a number of genetically unrelated languages in which the use of case is similarly sensitive to position (assuming the animacy-driven type needs no further illustration). As I will show, in each case, the use of case can be understood as the result of the interaction between an economy principle and predictability.

Müller, Gereon (2002) studies the interaction of word order and the use of case in terms of *scrambling*. He argues that free word order is a prerequisite for morphological case, rather than the other way around as it is often claimed, because (i) only languages that have free word order have morphological case (not the other way around) and (ii) not all objects that stay in base position receive morphological case. An example of the second observation is given in (22).

Korean (Korean; Müller, Gereon 2002; translations are mine, SL)

- (22) a. *Suna-ka nuku(-lûl)_i manna-ss-ni ?*
Suna-NOM who(-ACC) meet-PAST-Q
'Who did Suna meet?'
- b. *Nuku[?]*(-lûl)_i Suna-ka t_i manna-ss-ni ?*
who(-ACC) Suna-NOM t_i meet-PAST-Q
'Suna met who?'

As illustrated in (22), in Korean, a direct wh-object may or may not bear a morphological case *in situ*, that is, directly in front of verb. In contrast, it must bear morphological case when scrambled.

Müller, Gereon (2002: 22) explains these findings by a constraint CASE that says that "a DP at the edge of *v*P has morphological Case", in which edge is defined as the outer specifier of XP. My proposal can be seen as the motivation behind such a constraint, making its stipulation superfluous at the same time. If its preverbal position already tells the syntactic function of a constituent, case marking is optional. If the position of a constituent does not give information about its syntactic function, case can be used to do so.

In Turkish, in addition to structural position, the use of case is sensitive to specificity. Specific objects, that is, objects whose reference is presupposed by the speaker, bear accusative case; non-specific objects do not. Only accusative case marked objects can scramble. Zero marked objects have to remain *in situ*, directly adjacent to the verb, as illustrated in (23).

Turkish (Altaic; Kornfilt, Jaklin 2003: 127-128)

- (23) a. *Ahmet dün akşam yap-tığ-ım şahane bir pasta-yı ye-di.*
 Ahmet yesterday evening make-F.NOM-1SG fantastic a cake-ACC eat-PAST
 ‘Ahmed ate a fantastic cake which I made yesterday evening.’
- b. *Ahmet şahane (bir) pasta-yı dün akşam ye-di.*
 Ahmet fantastic a cake-ACC yesterday evening eat-PAST
 ‘Ahmed ate a fantastic cake [+specific] yesterday evening.’
- c. *Ahmet dün akşam şahane bir pasta ye-di.*
 Ahmet yesterday evening fantastic a cake eat-PAST
 ‘Ahmed ate a fantastic cake yesterday evening.’
- d. **Ahmet (bir) pasta dün akşam ye-di.*
 Ahmet a cake yesterday evening eat-PAST
 Intended: ‘Ahmed ate (a) cake [–specific] yesterday evening.’

In (23a), the specific object is case marked and directly adjacent to the verb. In (23b), the case marked object scrambled. In (23c), the nonspecific object remains caseless. As (23d) shows, this unmarked object cannot scramble. Thus, objects that do not bear object case are confined to the immediate left of the verb, while objects that do bear accusative case marking may move around (Kornfilt, Jaklin 2003: 127). In my analysis, this is explained by the possibility to tell the syntactic function of the case marked object by its case.

In Hungarian, we find the same kind of variation. Consider the following example:

Hungarian (Uralic; Nikolaeva, Irina 2002)

- (24) a. *Péter-nek a kalap-ja*
 Peter-DAT the hat-3SG
 ‘Peter’s hat’
- b. *(a) Péter kalap-ja*
 the Peter hat-3SG
 ‘Peter’s hat’

When the possessor is external to the DP dative marking is used. This marking is omitted when the possessor appears prenominal. Again, the relation between the possessor and the possessee is clear from word order in (24b), but less so in (24a), hence the case marking in the latter.

Finally, consider the example from Warlpiri. In this language, case concord only takes place if the adjective is nonadjacent to the noun.

Warlpiri (Australian; Hale 1973: 314, cited in Moravcsik, Edith A. 2009: 238)

- (25) a. *Tjantu wire-ngki tji yalkunu*
 dog big-ERG me bit
 ‘The big dog bit me’
- b. *Tjantu-ngki tji yalkunu wire-ngki*
 dog-ERG me bit big-ERG
 ‘The big dog bit me’

If the argument to which an adjective applies follows from word order, case concord is unnecessary, as illustrated in (25a). If the adjective and the noun it modifies are separated, however, both need to be marked with case, as shown in (25b). Without the use of ergative case on the adjective, it is not clear to which nominal it belongs. By the use of ergative case, the speaker makes sure that the hearer does get the right interpretation.

In all examples above, the use of case is dependent on the position of the constituents it marks. The intuitive motivation for this variation in case marking is very simple (see Lestrade, Sander and de Schepper, Kees and Westelaken, Steven and de Hoop, Helen 2010). If the relation between a verb and its object, or more generally, a head and its dependent, is not clear from word order, the speaker should use case to express this relation. If an object stands in canonical object position its function is made sufficiently clear by its position already. And if the use of case is redundant, it can be omitted because of economy reasons. When the objecthood cannot be told from word order, morphological case is used. Note that this idea squares nicely with the distinction between strong and weak case, as proposed by de Hoop, Helen (1996). Weak case is seen as a structural default case, establishing a direct relation between a structural position and the type of case. Objects that bear weak case may not move from their original (structural) position. Only strong case is inherited under movement, and therefore only moved NPs that are marked with strong case can survive the case filter.

Recapitulating, the use of case can be omitted if the relation it marks can already be told from word order or the animacy of its referent. This explains the position dependence of the use of r-form in Dutch, illustrated above and repeated in short form in (26).

- (26) *Ik ben (ergens) over (iets) aan het nadenken.*
 I am somewhere over something at the think
 ‘I am thinking about something.’

If the prepositional complement stands in its canonical position, directly following the preposition, the relation between the preposition and its complement can be told from word and no additional marking is needed. If, however, the relation between the complement and the preposition cannot be told from word order, an r-form has to be used.

In the next section, I will discuss the second, semantic restriction on the use of r-forms.

5 Case Typing

The interaction between animacy and case discussed above was explained in terms of markedness. If the animacy of the referent gives sufficient clues to its function already, case does not have to be used. If the argument is an unexpected performer of the function that the case expresses, case has to be used to make this explicit. This explanation cannot be correct for the animacy-driven variation we find in Dutch, however. Spatial case is used to mark a *ground*, which is a stable reference object that is used to locate a movable entity, the *figure* (Talmy, Leonard 1975, 2000). Among the most salient properties of animates is their movability (cf. the proto-properties of Dowty, David 1991). Clearly, it is not much use using an animate as a ground if it is likely that it will move somewhere else shortly. Inanimate things, like houses, on the other hand, can be used as reference points more reliably, as they are less likely to move away. So, if case is used to explicitly mark an unexpected function, as the markedness account has it, we would expect spatial case to be used on nouns with human referents. But in Dutch, we find the exact opposite, the use of spatial case being prohibited for human referents. Still, this also follows from a markedness principle, as I will show in this section.

In structural differential case marking, the choice is generally between a zero marker and a case. In this alternation, case is the marked option. The general picture, however, is that there is choice between a more economical and a more elaborate form. The more unexpected some meaning is, the more elaborate encoding it needs for successful communication (see Svorou, Soteria 1993: 5). If a meaning is predictable, a more economical form can be used.

Aristar, Anthony A. (1996, 1997) discusses differential case marking in which the use of case is the *unmarked* option. In this version, the choice is between a case marker and a more elaborate construction. Aristar analyzes this variation in terms of *case typing*. Semantic cases often show animacy restrictions on their arguments, that is, they select for specific argument types. Aristar identifies three strategies when a mismatch occurs between the type requirement of a case and the animacy features of its complement. In the first strategy, a type mismatch is resolved by the use of some additional morphology (“bridges”). Consider the following examples from Kuvi.

Kuvi (Dravidian; Aristar, Anthony A. 1996: 215).

- (27) a. *āyana-ki*
woman-DAT

- ‘to the woman’
- b. *ilu ta-ki*
house P-DAT
‘to the house’
- c. *āyani taḡ-a*
woman.GEN P-LOC
‘at the woman’s place’
- d. *ilut-a*
house-LOC
‘at the house’

As illustrated in (27), the dative is unmarked with humans; nonhumans need a postposition as a linking marker for this case (27a,b). For the locative, the markedness pattern is reversed. A noun with a human referent needs a postposition as a linking marker, whereas the locative is directly attached to nonhumans (27c,d). This strategy often goes together with the second one, a meaning extension of the case function. In (27c), for example, the literal meaning of a locative construction with a human referent is a circumlocution.

The third, and most relevant strategy for our present discussion, is the exclusion of some combination. This strategy is found when cases are in complementary distribution. For instance, as Aristar (1997:346) reports, in Old Hittite the dative case only appeared with animate nouns, while the locative case only appeared with inanimate nouns. Likewise, in Basque benefactive case is reserved for animates, whereas instrumental case can only occur with inanimates. In other words, in these languages a type mismatch results in ungrammaticality.

In sum, case exhibits typing behavior. In terms of the functional perspective developed here, the application of an unexpected function to an argument needs to be marked explicitly to make sure the relation is established. A prototypical pairing of function and argument receives a more economical marking than unexpected combinations, and in some languages type mismatches are even ungrammatical. Since humans are no good grounds because of their movability, spatial case, expressing grounds, should not be used on constituents with a human referent. This explains the second restriction for Dutch r-forms. R-forms should not be used with human referents (see also Creissels and Mounole, this volume).

6 Discussion

In the previous sections, we have seen that pronominal forms in Dutch can be analyzed as case forms, and that r-forms are pronouns and, therefore, cases too. Since r-forms basically have a spatial meaning, as again illustrated in

(28), we have to extend the Dutch case paradigm with spatial case.

- (28) *Ik ben overal geweest.*
I am everywhere been
'I have been everywhere.'

Also, I have shown that case is used economically in many languages and that cases may exhibit typing behavior. More specifically, I have argued that speakers will not use case if the meaning contribution case makes is already clear from word order, and that spatial cases should not be used on constituents with a human referent. The combination of these two principles explains the restricted use of r-forms in prepositional constructions, again illustrated by the contrasts in (29).

- (29) a. *Heb ik (overal/*alles) aan gedacht?*
have I everywhere/everything at thought
a' *Heb ik aan (*overal/alles) gedacht?*
have I at everywhere/everything thought
'Did I think of everything?'
b. *Heb ik (#overal/*iedereen) aan gedacht?*
have I everywhere/everyone at thought
b' *Heb ik aan (*overal/iedereen) gedacht?*
have I at everywhere/everyone thought
Intended meaning: 'Did I think of everyone?'

As illustrated by the contrast between (29a) and (29a'), the spatial case form is only used if the (spatial) relationship it marks does not follow from word order, that is, if the prepositional complement directly follows its governing preposition. In addition, this spatial case form is only allowed for nouns with inanimate referents, as shown in (29b,b').

If r-forms only appeared in P-stranding construction and only with non-humans, as illustrated in (29), we might be less inclined to analyze it as case (although we could, of course). Similarly, if they only had an adverbial use, as in (28), we would probably be reluctant to analyze them as case forms (although, again, we could). Together, however, the instances are best explained under a case analysis. A different account either has to negate the pronominal nature of r-forms or analyze identical forms in different ways. Therefore, a case analysis seems to be the most parsimonious. Indeed, in (29), the r-form is clearly used to mark "dependent nouns for the type of relationship they bear to their heads", as required by the definition of case by Blake, Barry J. (1994: 1).

So what does the fact that Dutch has spatial case mean for our understanding of case? This very much depends on what we think case is. Although the core notion of case concerns inflectional endings that can be organized in

paradigms, its range of application differs between linguists and, as a result, there is no cross-linguistically valid definition (Butt, Miriam 2006). If we assume that cases can be classified into categorically different types, distinguishing semantic from structural case, we cannot give a unified account of the r-forms in (29). The same form is used structurally in (29) and semantically in (28). Also, under a standard Government and Binding view, there should be no such thing as semantically-driven differential case marking or case typing. From this perspective, we need to rethink our classification of case and the way in which case is assigned.

However, if we take a more functional perspective, we can be less surprised about Dutch having spatial case. In Lestrade, Sander (2010), I propose to think of morphological case as the result of a grammaticalization process in which frequently used items become more economical (i.e., require less articulatory effort) than less frequent items (see Zipf, George K. 1965; Heine, Bernd and Claudi, Ulrike and Hünemeyer, Firederike 1991; Bybee, Joan L. and Perkins, Revere and Pagliuca, William 1994; Haspelmath, Martin 2008; Kiparsky, Paul 2004). Only if a function is frequent enough, it can develop a case marker. Since argument structure has to be marked in virtually any clause, case marking can be expected first and foremost to express argument structure. And since the prime function of pronouns is to mark the syntactic function of established referents (Iggesen, Oliver A. 2009: 256; Bhat, Darbhe N.S. 2004: 6), pronouns are very likely candidates to become case forms. Apparently, spatial meaning can develop a case marker more easily than we might think. But this is only surprising if we expect spatial case to come in the form of elaborate paradigms only. However, as we have seen in the introduction to this chapter, spatial case starts out with a much more general ground function that can be used very frequently indeed.

In sum, it is not only syntactic functions like subject-of and direct-object-of that are general and frequent enough to develop case markers. Any function (that marks dependents for the type of relationships they bear to their heads; Blake, Barry J. 1994: 1) that is used frequently enough may develop a case marker.³ Spatial case does not only come in elaborate paradigms and the primary use of spatial case is much more general than generally thought. Rather than marking directionality and configuration contrasts, spatial case starts out as a marker of an underspecified spatial relation only.

Thus, even a poor case language like Dutch, in which the use of case is confined to the pronominal domain, may develop spatial case. The fact that the use of the spatial case form is restricted in Dutch need not surprise us considering the restrictions on case marking that we find cross-linguistically.

³Similarly, a frequent relation that is marked on the head may result in agreement.

Abbreviations

1 first person or noun class	INE inessive
2 second person or noun class	LOC locative
3 third person person or noun class	NOM nominative
ACC accusative	OBJ object
ANIM animate	P adposition
CL clitic	PFT perfective
DAT dative	PRT particle
ELA elative	Q question
ERG ergative	RED reduced
GEN genitive	S subject
ILL illative	SG singular
INAN inanimate	SUPER superessive
IND indicative	

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