The linguistic encoding of landscape in Lokono

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Categorization is an inherent feature of human cognitive systems and processes. Though its form and function may assume different guises, it is presumed that categorization allows us to better organize our knowledge of the world, and access it in a more efficient way (Cohen and Lefebvre 2005). In Koestler’s words, it is a mechanism that helps us “[…] eliminate a large proportion of the input as irrelevant ‘noise’, and assemble the relevant information into coherent patterns […]” (Senft 2010:676). In language, these “coherent patterns” assume the form of linguistic categories. To constitute a valid object of linguistic comparison, such categories must be definable language-internally by means of an exclusive linguistic feature, for instance, a morpheme or a syntactic structure.

Spatial categories in particular are said to reverberate through language structure. In its most extreme form, this localist view has led some linguists to believe that “space is at the heart of all conceptualization” (Pütz and Dirven 1996:xi). Although this extreme view has been contested, it remains a fact that many domains are structured in terms of the same patterns as spatial ones (Casasanto and Boroditsky 2008; Lakoff and Johnson 2003; Lakoff 1987). Detailed descriptions of unrelated languages have further demonstrated how differently languages structure space linguistically (e.g., Ameka and Levinson 2007; Levinson and Haviland 1994; Levinson and Wilkins 2006). Nonetheless, underlying the cross-linguistic variety and the cross-domain mappings is the single fundamental spatial question: Where is what? Levinson and Wilkins (2006) call it the Basic Locative Question. The most natural, language-specific answer to it constitutes the Basic Locative Construction. This question–answer frame operates on two indispensable entities: the entity to be located (i.e. the Figure), and the entity with respect to which location is established (i.e. the Ground).

Of course, the same entity can sometimes function as the Figure and sometimes as the Ground. Nonetheless, it has been observed that certain restrictions apply. A large, immobile entity such as a house functions as the Ground rather than the Figure when combined with a small, moveable entity such as a bike (Gruber 1976; Talmy 1983). Therefore sentences such as *The house is behind the bicycle are...
somewhat dubious. This implies that some entities function more readily as Figures, while others lend themselves better to functioning as Grounds, at least in a relative sense. In fact Talmy’s (2000:312) terminology explicitly refers to “moveable” and “stationary” as characteristics of the prototypical Figure and the prototypical Ground, respectively. On the mesoscale of human experience of the world, such predispositions of entities to function as Figures or Grounds should be relatively consistent. Bearing in mind that categorization filters out “coherent patterns”, it is possible that the capability of functioning as the Figure or the Ground should be impressed on language structure. In other words, nouns that encode prototypical Figures and nouns that encode prototypical Grounds could be differentiated grammatically.

In this chapter, I demonstrate that this may indeed be the case. I argue that in the Lokono nominal domain the what/where distinction operates. The distinction manifests itself in the form of different spatial marking. Nouns denoting people, objects, and parts of objects—that is, typical Figure-denoting nouns—receive different spatial marking than nouns denoting places—that is, typical Ground-denoting nouns. I call the former category what-nouns, and the latter the where-nouns. Below, I first summarize the theoretical literature that has broached the topic of the what and where as linguistic categories (§ 7.1). Since the what/where distinction manifests itself in the spatial expression, I then present a theory of spatial meaning adopted as a framework in this chapter (§ 7.2). Subsequently, I discuss basic features of Lokono grammar, focusing on other types of nominal categorization and the form of the spatial expression (§ 7.3). I then demonstrate how what- and where-nouns function in Lokono spatial descriptions (§ 7.3.1), and discuss the morphosyntactic details of the two categories (§§ 7.3.2 and 7.3.3, respectively). Finally, I scrutinize the data in the light of other types of nominal categorization, showing parallels with the mass/count dichotomy (§ 7.4).

7.1 Linguistic theory of what- and where-nouns

The idea that nouns can be categorized on the basis of their spatial marking appeared already in the posthumously published writings of Whorf. Mackenzie points out that Whorf considered English nouns denoting cities and countries a cryptotype—that is, a category that may “easily escape notice and may be hard to define, and yet may have profound influence on linguistic behavior” (Mackenzie 2005:144). Whorf observed that such nouns are language-internally definable as a class. They can be substituted by here/there but not by it in spatial contexts (i.e. when used as goals or locations). Mackenzie (2005) developed Whorf’s observation, and noticed that this category was not limited to nouns denoting cities and countries. It encompassed all of what he called place-denoting nouns, whether relational (e.g., right, lee, inside) or non-relational (e.g., Amsterdam). Such nouns are opposed to nouns denoting
physical entities, which in spatial expressions are substituted by *it* (or *him/her* if referring to people). Compare examples *a*, *b*, *c*, and *d* of (267).

(267) (a) *I’ve come from Amsterdam, and Mike has come from there/*from it too.
    (b) *I’m standing to the right of Mary, and John is standing there/*to it too.
    (c) *I’m sitting in the lee of the wind, and Mary is sitting there/*in it too.
    (d) *I’m wrapped up in the blanket, and John is wrapped up in it/*there too.

Mackenzie (2005:144)

Elaborating on Whorf’s idea, Mackenzie defined a category of place-denoting nouns in English. His aim was to advance a theoretical point of Functional Grammar—namely, that places are not a type of entity. In other words, he argued that places (e.g., the referents of nouns such as *Amsterdam* or *inside*) and objects (e.g., the referents of nouns such as *table* or *chair*) are ontologically different, which renders the linguistic expression of places different from that of objects. Without entering into the discussion about whether places are a type of entity or not, it is important for the analysis presented here that Mackenzie noticed the syntactic pattern differentiating place-denoting nouns from object-denoting nouns (*nota bene*, I use the term *entity* to cover people, objects, and places).

Prior to Mackenzie (2005), Lyons (1977) had arrived at similar conclusions, though from a different vantage point. Lyons (1977) attempted to define parts-of-speech by finding their prototypical exemplars. Relying on assumptions of naïve realism, he argued that the physical world, as humans experience it, is populated for the most part with more or less discrete and moveable entities. He called these entities *first-order entities* and nouns denoting them *first-order nouns*—Lyons’ nouns par excellence. It was clear to Lyons that not all nouns behave like first-order nouns. Interestingly, he mentions landscape terms as one exception. However, due to his focus on first-order nouns, Lyons said but little about the periphery of the nominal domain. Importantly, by defining first-order nouns through the ontological features of their referents (“discrete” and “moveable”), he too established a link between the linguistic categories and the ontological properties of the real-world correlates of their members. The work of Lyons and Mackenzie resulted therefore in the identification of two nominal extremes: first-order nouns and place-denoting nouns.

Landau and Jackendoff (1993), who appear to have coined the terms *what*- and *where*-category, later claimed that all languages are sensitive to the *what-* and *where*-categories—that is, the distinction between terms for first-order entities and

87 From a pilot study I conducted it appears that this distinction in English is not straightforward to the speakers and depends on the variety of English. To my knowledge there is no detailed study of how the distinction operates in English, and bearing in mind that in English configuration and directionality are not always clearly separable, the discussion of the two categories is complex. In this chapter I draw parallels with English, but these should be seen as a way to make the topic more familiar to the reader rather than as claims of linguistic parallelism.
terms for places—though their work was based on English data only. Their contribution to the development of this idea was an attempt at linking language structure to other cognitive systems. They tried to relate English prepositions to the where-system and nouns to the what-system of visual perception in the brain. Unfortunately, their study resulted in the association of spatial meaning solely with prepositions. The fact that nouns (e.g., Amsterdam) may belong to the where-category was overlooked.

The use of different terminologies, the Eurocentric bias, and the different research agendas have until now restrained research in this area. Studies by Cablitz (2008; 2006), who reported a case of the Marquesan what/where distinction, are a notable exception. In Marquesan the distinction is more pronounced than in English; nouns can be grouped into two categories based on the type of locative preposition they combine with. Critical of Lyons (1977), Cablitz (2008) points out that there is little evidence of which semantic parameters underlie the what/where split. It is worth reiterating that Talmy's (2000) definitions of the Figure and Ground also refer uncritically to notions “moveable” and “stationary”. In her work Cablitz (2008) looks beyond the mere labels to see what semantics is associated with them. Cablitz (2008) investigates the Marquesan distinction and shows that in the few cases, in which a noun can combine with the markers of both categories, the two markers module the meaning of the noun in a systematic way. Take as an example the Marquesan noun ka’avai, which denotes a river when preceded by the what-marker (the locative preposition ‘io in Marquesan), but a valley when preceded by the where-marker (the locative preposition ‘i). By analyzing the semantic changes of the switches from one category to the other, Cablitz (2008) concludes that the meaning of a perceptually more bounded entity is associated with the what-category. And vice versa, the meaning of a perceptually less bounded entity is associated with the where-category. Cablitz (2008) makes therefore the first step in re-evaluating the semantic parameters that many took for granted. Importantly, phenomena similar to the distinction described for Marquesan, or for Lokono here, have been mentioned in passing in studies of many unrelated languages, such as Makalero from the Papuan family (Huber 2014), Onondaga, an Iroquoian language (Woodbury 1975), Bardi, a Nyulnyulan language (Bowern 2012), Longgu, an Oceanic language (Hill 1996), or Zulu and Tharaka, two Bantu languages (Buell 2007). The cross-linguistic diversity of the exponents of the what/where distinction has until now obscured the bigger picture—namely, the fact that the what- and where-categories are a cross-linguistically attested form of nominal categorization. Below I give a detailed description of how the what/where distinction operates in Lokono in an attempt at bridging this gap.

I use what and where as labels for the two categories, since they are already generally accepted (Cablitz 2008; Landau and Jackendoff 1993). Other scholars have used different variations on the words object/entity/thing and place/non-entity but they turned out to be impractical because of the ambiguity of such terms in linguistics and in geography.
7.2 Spatial meaning in linguistic theory

The locus of the what/where distinction is the cognitively universal directionality component of the spatial expression. Previous studies of the what/where distinction have not looked specifically at the division of work in the spatial expression and have not named the directionality component specifically as the grammatical context, in which the distinction manifests itself. The discussion of the two categories requires therefore a theoretical framework of spatial meaning.

The Basic Locative Construction consists of the already mentioned Figure and Ground, but also of the spatial relation that holds between them. Following the work of Lestrade (2010), I decompose the spatial relation into a configuration and a directionality component. Configuration describes the type of spatial relation that holds between the Figure and the Ground. The number and the type of configurational distinctions (e.g., topological, relative, intrinsic, absolute) vary from one language to another (cf. Bowerman and Choi 2003; Levinson et al. 2003; Bowerman and Gentner 2009). Moreover, languages use different linguistic means to encode configurational concepts, such as configurational adpositions (e.g., English), configurational verbs (e.g., Makalero), or configurational nouns (e.g., Baure) to name some of the more common strategies.

The cross-linguistic variety of configurational concepts and their linguistic encoding contrasts with the universality of the directionality component of a spatial expression. Lestrade (2010) defines directionality as the change of configuration over time. Directionality has therefore only three primary distinctions:

(1) location directionality—that is, the absence of change in configuration.
(2) goal directionality—that is, the change into a configuration.
(3) source directionality—that is, the change out of a configuration.

According to Lestrade (2010:74), these primary distinctions “can be seen as cognitive universals”. Directionality has also secondary distinctions—namely, the atelic equivalent of goal—that is, toward—and the atelic equivalent of source—that is, away from—encoding the situations in which the change of configuration is not complete. Finally, there is the via directionality, applicable when the Figure changes location over time within the same spatial configuration or when the Figure enters and exits a configuration with a single event, as in the English sentences We have been walking in the forest for hours or We walked through the forest in an hour, respectively. For reasons of economy, languages may collapse some or all of the directionality distinctions into one form, and leave disambiguation to the linguistic context (cf. Nikitina 2009; 2008; Sinha and Kuteva 2008). Importantly, it is the

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89 The terms directionality and configuration are used in keeping with the theory proposed by Lestrade (2010), which builds upon earlier work by Kracht (2008; 2003; 2002). They correspond to the earlier notions of Path and Place (Jackendoff 1990) or Vector and Conformation (Talmy 2000). However, I use the term location directionality instead of place directionality, since the term place has multiple meanings in the literature on space and landscape.
cognitively universal directionality component that is the locus of the what/where
distinction. In other words, it is the directionality markers that are the defining
features of what- and where-nouns, not the configurational terms, which are more
language-specific.

7.3 Lokono what/where distinction

Before I demonstrate how the what/where distinction operates in Lokono, a short
introduction to the Lokono grammar and directionality paradigm is necessary. The
data presented here represent the Surinamese variety of Lokono as it is spoken in the
Para district. The data come from a collection of recorded narratives, conversations,
and stimulus-based elicitation sessions focused on the grammatical encoding of
spatial relations. The consultants who participated in the recordings were both men
and women, ranging from 40 to 90 years of age. The provenance of examples—that
is, the speech genre, the location, and year of the recording—is given in each case.

Lokono has a split active/stative verb system (see § 3.4.1). Active verbs
lexicalize actions and can attach a personal prefix to encode the Subject. Stative
verbs, on the other hand, encode states, and their subjects can be expressed with the
personal enclitics—the same enclitics that encode the object of transitive verbs. Both
types of verbs can combine with a number of suffixes expressing tense, aspect, and
mood. In this chapter I focus on the nominal domain, therefore I do not discuss the
verbs in detail. The active/stative distinction is, however, an important mechanism
disambiguating the conflated location and goal directionality discussed below.

Lokono nouns are categorized along several dimensions. It is worth pointing out
that all three types of nominal categorization discussed below have their specific
grammatical locus and exponents. Lokono nouns are grouped into masculine nouns,
limited to nouns denoting Lokono males, and non-masculine nouns, including terms
for all other entities (see § 3.3.1). The distinction manifests itself on 3rd person
pronouns, prefixes, enclitics, demonstratives, relativizers and a few other
morphemes, as illustrated in examples (268).

(268)  Lira li sathi wadili.
li–ra  li  sa–ʧi  wadili
DEM.M–MED DEM.M  good–SBJ.REL.M  man
‘He is a good man.’ (Cassipora, 2009, elicitation)

In (268) the gender distinction recurs throughout the equative clause. It is encoded
by the demonstrative lira functioning as the argument of the predicate. It also
reappears in the nominal predicate, which contains the verb san ‘good’ combined
with a relativizer and the masculine demonstrative li, agreeing in gender with the
head of the noun phrase wadili ‘man’.

Nouns are also divided into alienable and inalienable (§ 3.3.2). The possessor in
Lokono can be expressed by a noun preceding the possessed noun or a personal
prefix attached to it—the same prefixes that encode the subject of active verbs are
used to encode the possessor. Alienable nouns receive additionally a possessive
suffix when possessed, for instance, da–yoro–n ‘my cassava press’ (lit. ‘1SG.A–
cassava.press–POSS’). Inalienable nouns, on the other hand, are characterized by the absence of a possessive suffix when possessed, for instance, da–duna ‘my arm’ (lit. ‘1SGA–arm’). There are also a number of irregular and suppletive possessed forms, and a few nouns that cannot be possessed at all.

When quantified, Lokono nouns can be classified as single object nouns, set nouns or mass nouns (Rijkhoff 2002). Single object nouns and set nouns combine directly with numerals higher than one. However, only single object nouns encode singular entities, and therefore receive plural marking when combined with numerals higher than one, for instance, bian hiyaro–no ‘two woman–PL’. Set nouns are transnumeral, and therefore remain unmarked for number, for instance, bian pêro ‘two dogs’. Mass nouns do not combine directly with numerals higher than one at all, but necessitate a mensural classifier, for instance, bian mothoko karə ‘two sand grain’. The noun mothoko ‘sand’ combines first with the mensural expression karo ‘grain’. The possessive phrase mothoko karo ‘grain of sand’, headed by the set noun karə ‘grain’, can in turn combine with numerals.

The Lokono spatial expression consists of a clearly separable configuration and directionality component. Configuration is expressed by a range of configurational nouns, expressing topological, intrinsic, relative, and absolute spatial relations, such as loko ‘inside’ (§ 3.6.4). Configurational nouns are not an obligatory part of the spatial expression, but appear when there is a need to specify the spatial configuration. When used, they follow the Ground-denoting noun and form a possessive phrase with it, for instance, yoro loko ‘inside of a cassava press’. All configurational nouns are inalienably possessed, therefore no possessive marker is necessary in such phrases with the Ground-denoting noun as the possessor.

The directionality markers follow the Ground-denoting noun or the possessive phrase with a configurational noun, if there is one (§ 3.6.3). The location and goal directionality are conflated into one category in Lokono, and are disambiguated by the verb—a cross-linguistically common pattern. A predicate that implies lack of motion signals the location directionality. Example (269) comes from the description of the Picture Series for Positional Verbs stimulus, showing a rope hanging from a tree branch (Ameka, Witte, and Wilkins 1999).

(269) Onabonrokada no.
    onabô–n–ro–ka=da=no
down–LOC.WHR–ATL–PFV=DIRECT=3Fb
‘It is oriented toward the ground.’ (Cassipora, 2012, elicitation)

In (269) the configurational noun onabo ‘down’ encoding the direction on the abstract vertical dimension is employed. It is one of the two configurational nouns that are never possessed, since it encodes an absolute spatial dimensions. Just like other types of configurational nouns onabo is followed by the location and goal directionality marker –n. In (269), the atelic suffix –ro additionally appears, signaling that the configuration is not fully reached, but that the Figure is merely oriented toward it. The whole spatial expression onabonro ‘towards the ground, downwards’ is combined with the perfective suffix –ka forming a stative clause, the subject of which encodes the Figure. Stative predicates do not encode motion
therefore the location and goal directionality marker –n is interpreted as indicating the location directionality.

A motion predicate, in turn, implies the goal directionality, as in (270), where the same location and goal directionality marker –n is used. Notice that the atelic suffix –ro appears here as well, signaling that the configuration is not achieved. In both (269) and (270) the atelic suffix can be removed, implying that the configuration is reached.

\[(270)\]  \textit{Dôsa konokonro.}\n\begin{verbatim}
d–oːsa konokô–n–ro
\end{verbatim}\n\begin{verbatim}
1SG–go forest–LOC.WHR–ATL
\end{verbatim}
'I went towards the forest.' (Cassipora, 2011, narrative)

In (270) there is no configurational noun that specifies the spatial relation. The Ground-denoting noun konoko ‘forest’ is combined directly with the directionality marker –n and the atelic suffix –ro. The whole expression functions as an adverbial encoding the goal of motion of the active verb ôsun ‘go’. Importantly, in the next section, a second directionality marker—namely, bithi—is introduced. The two directionality markers, bithi and –n, combine with different types of nouns, dividing the nominal domain into what- and where-nouns. The source directionality has two related forms: the telic âya and the atelic ôya. The via directionality is expressed, in turn, by the suffix –di. The source and via directionalities are insensitive to the what/where distinction, and are therefore not discussed further in the sections below (but see §§ 3.6.3.4 and 3.6.3.5, respectively).

\subsection{What/where distinction}

The location and goal directionality has two formal exponents that divide the nominal lexicon into two distinct categories. First, there is the suffix –n that appeared already in examples (269) and (270) above. Second, there is the free form bithi. The nouns that combine with the -n-marker are henceforth called where-nouns; those that combine with the bithi-marker are called what-nouns. The category of where-nouns includes, for instance, terms for human-made landscape features, such as the alienable noun kabuya ‘field’ in (271).

\[(271)\]  \textit{Bôsa kabuyan!}\n\begin{verbatim}
b–oːsa kabiya–ŋ
\end{verbatim}\n\begin{verbatim}
2SG–go field–LOC.WHR
\end{verbatim}
'Go to the field!' (Cassipora, 2013, natural discourse)

In (271), the noun kabuya is followed by the directionality marker –n. The expression kabuyan ‘to the field’ encodes the goal of motion lexicalized by the verb

\footnote{Notice that in (269), the atelic suffix –ro is part of a stative predicate, resulting in the meaning ‘oriented toward’. This is against Lestrade’s theory, which denies the possibility of extending the telicity distinction to the location directionality (Lestrade p.c.).}
ôsun ‘go’. The what-category, on the other hand, includes, for instance, terms for people such as the inalienable noun oyo ‘mother’ in (272).

(272) Bôsa boyo bithi.
\[
\begin{array}{ccc}
2SG_x – go & 2SG_x – mother & \text{LOC.WHT} \\
\end{array}
\]

‘Go to your mother.’ (Cassipora, 2013, natural discourse)

In (272), the inalienable noun oyo ‘mother’ is combined with the directionality marker bithi; the phrase encodes the goal of motion lexicalized by the verb ôsun ‘go’ as well. The reverse combinations *kabuya bithi and *boyon are unacceptable. In the followings sections I look in detail at the types of nouns that combine with each of the directionality markers.

It is worth mentioning that when a noun is combined with the location and goal directionality markers, the location or goal implied is unspecified with respect to configuration. This applies to both the what- and the where-marker. In (273) two different nouns appear with the where-marker. The speaker describes the physical location where she left her children—that is, a boarding school, without specifying any configurational relation.

(273) […] shikin skoron ye, faretho shikwanro, internatinro.
\[
\begin{array}{ccc}
\text{put--NMLZ.EVENT} & \text{school--LOC.WHR--3PL} & \text{white.man} & \text{house.POSS--LOC.WHR--ATL} \\
\end{array}
\]

‘[…] putting them at school, in the city.’ (Matta, 2011, narrative)

In (273) two nouns that typically combining with the where-marker appear. Importantly, the combination skoron, for instance, means ‘at school’, which can imply a location inside the building, on top of the building, or in the vicinity of it. If the spatial relation is informationally salient the relevant configurational noun can be added, forming a possessive phrase with the Ground-denoting noun, for instance, skoro loko ‘at the inside of a school’, with the configurational noun loko ‘inside’ and the where-marker. Configurational nouns—as nouns denoting places—always necessitate the use of the where-marker.

7.3.2 What-nouns

The Lokono what-nouns include generic and proper person-, animal-, plant- and object-denoting nouns, and nouns referring to parts of such entities. The category also encompasses pronouns, demonstratives, as well as the question words hama ‘what’ and halikan ‘who’. The defining feature of what-nouns is their compatibility with the what-marker bithi in the location and goal directionality. However, the what-category is internally divided into two subgroups when by the combinatorial possibilities with the telic and atelic what-marker are taken into account.

The first subgroup includes generic and proper names of persons, pronouns, demonstratives, the interrogatives halikan ‘who’, hama ‘what’, and the noun (ha)mathali ‘thing’. All these forms combine with the telic what-marker bithi and its atelic equivalent bithiro. In (274), for instance, the Ground is expressed by the noun
hamathali ‘thing’. The example comes form a description of the Event Triads stimulus, showing a ball rolling toward a wooden block (Bohnemeyer, Eisenbeiss, and Narasimhan 2001). During this recording, the participant was asked to imagine, however, that the ball is a person, hence the use of the masculine gender prefix to encode the subject of the verb, which is used only if the referent is a Lokono man.

(274) Lokonâha tâ, tora mathali bithi ôsa.
lo–kona–:ha ta: to–ra mathali bitfi o:sa
3MA–walk–FUT far DEM–MED thing LOC–WHT go
‘He walked far, to that thing (he) went.’ (St. Rose de Lima, 2011, elicitation)

In (274), the noun phrase tora mathali ‘that thing’ is followed by the directionality marker bithi. The whole expression encodes the goal of motion of the verb ôsun ‘go’. Being a free form, bithi can also combine with personal prefixes that refer to animate beings, objects, plants, but not to places. In (275) the third person nonmasculine prefix refers to an enclosure into which a ball rolls. The example is a description of a scene from the Event Triads stimulus (Bohnemeyer, Eisenbeiss, and Narasimhan 2001).

(275) Thôsun thibithi barhin […]
ô:–o:ši–n ti–bitfi baři–ŋ
‘Although it went to it […]’ (St. Rose de Lima, 2011, elicitation)

In (275) the Ground is encoded by the prefix attached to the directionality marker bithi. The whole expression again encodes the goal of motion of the verb ôsun ‘go’.

The second subgroup of what-nouns consists of nouns denoting animals, plants, objects, and their parts. These nouns can only combine with the atelic what-marker bithiro, which signals that the configuration is not achieved. In (276), the referent is a bicycle, called by the Lokono faretho darhidikawana, literally ‘white man’s running device’.

(276) Faretho darhidikwana bithiro dandunha […]
faretho darhidikwana bitfi–ro d–ândi–ŋ–ha
‘Coming toward the bicycle […]’. (2009, Cassipora, narrative)

In (276) the Ground-denoting noun faretho darhidikwana ‘bicycle’ is followed by the atelic marker bithiro. The whole expression encodes the goal toward which the movement encoded by the verb andun ‘arrive’ is oriented. If one wants to express the telic location and goal directionality with nouns denoting animals, plants, objects, or parts thereof, one has to combine them first with a configurational noun into a possessive phrase, describing a specific spatial relation between the Figure and the Ground. Configurational nouns are the head in such possessive phrases, and belong to the where-category discussed below, therefore the where-marker is invariably used. It is tempting to draw an analogy between the use of configurational nouns with what-nouns to encode the telic directionality, and the use of set nouns
with mass nouns to quantify the referents. In both cases, a possessive phrase is formed, the head of which is a member of the other category (a where-noun or a set noun), rendering the phrase suitable for quantification or localization, respectively.

7.3.3 Where-nouns

The category of where-nouns includes a number of nouns that denote places, for instance, geographic-scale places (e.g., konoko ‘forest’), buildings (e.g., bahu ‘house, building’), configurational nouns (e.g., diako ‘top’), the question word halo ‘where’, and deictic terms. The category is defined by the where-marker –n in the location and goal directionality. The where-marker is typically a reduced variant of the form –mun, which today is rarely used. However, the non-reduced form is still found in quite recently collected texts, showing that the phonological reduction is a new development. In (277) the non-reduced form –mun is combined with a landscape term kabuya ‘field’.

(277) Thôsada kabuya munro.
   tô–ô:s=da kabiya mîn–ro
   3F.A–GO=DIREC field LOC.WHR–ATL
   ‘She went to the field.’ (Patte 2011: 169)

The where-marker has different phonological realizations, although in the orthography adopted by the community it is always written as an <n>. When following the consonant /n/, an epenthetic vowel –i is inserted. When following a diphthong, or a consonant other than /n/, an epenthetic syllable –ni is inserted, as in (278).

(278) Redi Doti of Paranamnin […]
   redi doti of paranam–pî–n
   Redi Doti or Paranam–EP–LOC.WHR
   ‘at Redi Doti or Paranam […]’ (Cassipora, 2012, narrative)

If the consonant /b/, /p/, /t/, /t\h/ /d/, /k/, or /k\h/ follow the marker, it assumes the form of a homorganic nasal. If it appears phrase-finally, it is realized as [ŋ]. In all other contexts it has the form [n].

Analogically to the what-category, the where-category is also internally structured with respect to telicity. The nouns from the first subgroup require the where-marker in both telic and atelic contexts. These include generic terms for

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91 Interestingly example (278) shows that the where-marker may still be less bound than presented here. In (278), it seems to operate as an enclitic on a phrasal level applying to two conjoined nouns. However, there is little data to test this hypothesis, and it should be noticed that example (278) is heavily influenced by the contact languages. The place name Redi Dotti is of Sranantongo origin, while Paranam is of uncertain Amerindian origin; the conjunction of ‘or’ is borrowed from Dutch. Lokono has no such conjunctions; the equivalent would have to be expressed as two clause, and the where-marker would probably be used twice.
landscape features (e.g., onikhan ‘creek’, konoko ‘forest’, karhow ‘savanna’, horhorho ‘landform’), terms for vegetation patches derived with the suffixes –wki and –wkar (see chapter 5), and proper places names. This subgroup also includes numerous locative nominalizations in –nale, derived from verbs encoding an activity or nouns related to an activity, for instance, natikanale ‘their toilet’ from tika ‘feces’. The entities denoted by the locative nominalizations vary from small areas of a forest (e.g., nakodanale ‘their weaving place’, from the verb kodon ‘weave’) to a corner of a room (e.g., danale ‘my part of the traditional thatched house’). In the same subgroup there are also terms for structures, for instance, banabo ‘hut’ and skoro ‘school’ (a borrowing from Sranantongo). The use of place names in the location and goal directionality is exemplified in (279).

(279) **Korhopan dôsa kiba.**

koropâ–n d–oːsa kiba
Korhopa–LOC.WHR 1SG–go again
‘I went to Korhopa again.’ (St. Rose de Lima, 2011, narrative)

In (279) the place name Korhopa is combined with the telic where-marker, encoding the goal of motion. The atelic equivalent of (279) is formed by the addition of the suffix –ro to the where-marker.

Configurational nouns constitute another subgroup. Configurational nouns specify the spatial configuration between the Figure and the Ground—they are the equivalents of the English spatial prepositions. Some of them express topological relations such as containment, contact, and proximity. The containment configurational nouns are all related and sensitive to the type of container, for instance, rako ‘inside a liquid’, loko ‘inside a rigid object’, and koloko ‘inside an unbounded container’. Other configurational nouns encode non-topological relations. These include terms for relative and absolute spatial relations (e.g., isa ‘right’ and ayo ‘up’, respectively). In the telic location and goal directionality, many configurational nouns can drop the where-marker and stand unmarked in a spatial expression, as in (280). This differentiates them from first subgroup of where-nouns, which always require the where-marker in spatial expressions.

(280) **Iniabo rakoka to shiba.**

iniabo rako–O–ka to jiba
water inside[liquid]–LOC.WHR–PFV DEM:F stone
‘The stone is in the water.’

In (280) the symbol Ø indicates the slot, in which the optional telic where-marker –n can appear. Historical sources show that the non-reduced form of the where-marker was present in the telic location and goal directionality with configurational nouns, for instance, akulukkumün ‘to/at inside an unbounded container’, the equivalent of koloko(n) today (Schumann and Schumann 1882a). Although this varies per
configurational noun, the unmarked forms are preferred today. Although unmarked configurational nouns can function in spatial expressions, and are usually found in this context, they can also function as the object of the verb. The configurational noun loko *inside*, for example, can be used as a mensural expression, as in aba ida loko *one calabash* (lit. *one inside of a calabash*). This again depends on the configurational noun. Some nouns are more inherently spatial than others, and their use may therefore be restricted to the spatial expression.

This brings us to the last subgroup of where-marked expressions, which includes only a few terms—namely, the locative demonstrative adverb ya, and its proximal, medial, and distal derivations, as well as the locative anaphoric adverb yo, and the question word halo *where*. All these forms can only be used in the spatial expression, and therefore can no longer be classified as nouns. The locative adverb yo and the question word halo *where* combine with the where-marker, but neither of the two can drop it. The interrogative halo *where* is exemplified in (281).

(281) Halon bôsabo?
halô–m b–ô:sa–bo
where–LOC.WHR 2SG–go–PRG
‘Where are you going?’ (Cassipora, 2011, natural discourse)

In (281) the where-marked interrogative halo *where* functions as an adverbial to the verb ôsun *go*. The demonstrative adverb ya and its derivations, on the other hand, have dropped the where-marker in the telic mode completely as in (282), from a traditional Lokono story.

(282) Lôsa kida yara, abanbo, ada yabon.
1–ô:sa kida ya–ra–Ø abâ–m–bo
3M–go again LOC.DEM–MED–LOC.WHR INDF–LOC.WHR–CNTR

ada yabô–ŋ
tree behind–LOC.WHR
‘He went again here nearby, somewhere behind a tree.’ (Bernhardsdorp, 2011, narrative)

In (282), the distal locative demonstrative yara, encoding the goal of movement, is unmarked for location and goal directionality. Notice that two more spatial expressions in the clause, both of which contain the where-marker. The telic where-marker is never attested with the demonstrative adverb ya. However, when used in the atelic mode the where-marker –nro is employed, as in (283), from the description of a creek which harbors malevolent spirits.

92 The configurational noun khona developed two distinct meanings. When used with the where-marker, it has a non-spatial meaning ‘about’. When unmarked, it can only be read as a configurational noun meaning ‘adhering to the surface; along’.
Bôsama kho yaranro.
\[ b-o:sa-ma=k\h o \quad ya-râ--n-ro \]
\[ 2SG\_go--ABIL.1\_NEG \quad LOC.DE-
M ED--LOC.WHR--ATL \]
‘You cannot go toward there.’ (Cassipora, 2010, narrative)

In (283) the same distal demonstrative encodes the atelic goal toward which the movement is oriented. The atelic where-marker is obligatory with demonstrative adverbs.

In conclusion, it should be reiterated that what- and where-nouns are defined by the two location and goal directionality markers, and are internally structured with respect to telicity, as summarized in Table 53.

<table>
<thead>
<tr>
<th>Category</th>
<th>Atelic Object of verb</th>
<th>Type of expression</th>
</tr>
</thead>
<tbody>
<tr>
<td>what</td>
<td>bithiro bithi</td>
<td>yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>kalikan ‘who’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>hama ‘what’</td>
</tr>
</tbody>
</table>
|          |                       | hamathali ‘some-
thing’             |
|          |                       | pronouns          |
|          |                       | demonstratives    |
|          |                       | person-denoting nouns |
|          | configurational       | yes               |
|          |                       | object-denoting nouns |
|          |                       | plant-denoting nouns |
|          |                       | animal-denoting nouns |
|          |                       | part-denoting nouns |
| where    | -nro                  | yes               |
|          | -n                   | yes (some)        |
|          |                       | generic landscape terms |
|          |                       | place names       |
|          |                       | terms for struc-
tures |
|          |                       | locative nominali-
zations |
|          | -n or zero            | no                |
|          |                       | halo ‘where’      |
|          |                       | yo ‘locative anaphoric adverb’ |
|          |                       | demonstrative ad-
verb ya |

The atelic marking divides the nominal domain into two large categories: what-nouns are marked with bithiro and where-nouns with -nro. The telic marking subdivides both categories. What-nouns are split into nouns that combine with the telic bithi, and those that cannot combine with it, and therefore necessitate a different strategy—namely, the addition of a configurational noun—to encode telic configurations. Where-nouns are divided as well with respect to telicity into nouns that require the where-marker in the telic mode, and those that can drop it. Interestingly, as one moves from what- to where-nouns, the gradual loss of nominal features, such as the ability to function as the core argument of the verb, can be observed. The last subgroup of terms combining with the where-marker can therefore no longer be considered nominal. The association of the where-nouns with the decrease in nominal character and the increase in the verbal features has also been noticed in other languages, for instance, in Makalero (Juliette Huber p.c.).
7.3.4 Borderline cases

The categories of what- and where-nouns are typified by fuzzy boundaries and, though generalizations can be made, there are also idiosyncratic combinations. Importantly, these are explainable through mechanisms such as lexicalization and grammaticalization. The term âmun ‘by, next to’, for instance, appears in the location and goal directionality with what-nouns. From the description above in this case the what-marker or a configurational noun followed by the where-marker is expected. It turns out that historically âmun is indeed a where-marked configurational noun. The comitative marker oma has a secondary function as a configurational term encoding proximity. It was combined with the non-reduced form –mun, from which the where-marker –n developed through phonological reduction. The combination omamun, attested in historical sources, was shortened to âmun and today functions as a complex directionality marker (§ 3.6.3.6).

Such synchronically opaque forms, however, are fairly rare. More interesting for the discussion of the what/where distinction is the synchronic boundary between what- and where-nouns. A number of nouns can combine with both the what- and the where-marker. Importantly, the differential directionality marking results in predictable systematic changes in meaning, showing that the what/where distinction is synchronically transparent and semantically motivated. Category shifts are possible with a few types of nouns—namely, the person-denoting noun datra ‘doctor’, some object-denoting nouns, some relational nouns, a few landscape terms, and the indefinite pronoun aba. The unexpected combinations shed light on the semantic motivation of the distinction. The five borderline cases are listed in Table 54 and discussed below.

<table>
<thead>
<tr>
<th>What-noun reading</th>
<th>Where-noun reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>doctor (person)</td>
<td>Person-denoting noun</td>
</tr>
<tr>
<td></td>
<td>datra</td>
</tr>
<tr>
<td></td>
<td>clinic (institution)</td>
</tr>
<tr>
<td>tree</td>
<td>Object-denoting nouns</td>
</tr>
<tr>
<td></td>
<td>ñlo</td>
</tr>
<tr>
<td></td>
<td>place named after a tree</td>
</tr>
<tr>
<td>face (part)</td>
<td>Relational nouns</td>
</tr>
<tr>
<td></td>
<td>shibo</td>
</tr>
<tr>
<td></td>
<td>front (spatial region)</td>
</tr>
<tr>
<td>landform (on a map)</td>
<td>Landscape terms</td>
</tr>
<tr>
<td></td>
<td>horhorho</td>
</tr>
<tr>
<td></td>
<td>landform (landscape feature)</td>
</tr>
<tr>
<td>someone/something</td>
<td>Indefinite pronoun aba</td>
</tr>
<tr>
<td></td>
<td>aba</td>
</tr>
<tr>
<td></td>
<td>somewhere</td>
</tr>
</tbody>
</table>
7.3.4.1 Person-denoting noun _datra_ ‘doctor’

Person-denoting nouns normally do not combine with the _where_-marker—that is, they belong to the _what_-category. An important exception is the noun _datra_ ‘doctor’, borrowed from the _lingua franca_ Sranantongo. The noun _datra_ combines with the _what_-marker, as expected, but also with the _where_-marker. The expected combination _datra bithi_ is used when the location or goal is a physical person, as in (284).

(284) Dôsa koba datra bithi.
    d–oːsa=koba datra bîtʃi
    1SG.g-o=REM.PST doctor LOC.WHT

‘Long time ago, I went to the doctor (a person).’ (Cassipora, 2013, narrative)

In (284) the goal of movement is a physical person; the sentence could be used, for instance, to describe movement toward a doctor standing in the hallway of a hospital waiting for a patient. On the other hand, the unexpected combination _datran_ cannot be used when movement toward a physical person is implied. Rather, the combination _datran_ means that the goal is a location—the place where the doctor works, as in (285).

(285) Wôsa bi datran.
    w–oːsa=bi datrəŋ
    1SG.g-o=REM.PST doctor–LOC.WHR

‘We went to the doctor (a clinic).’ (Cassipora, 2011, natural discourse)

As such the distinction is reminiscent of the English use of the morpheme ’s (cf. _I went to the doctor_ vs. _I went to the doctor’s_). The shift from the _what_-category to the _where_-category results in this case in the change of the referent from a person to a building or institution in which the person works. Interestingly, the _where_-marker on a person-denoting noun cannot be used to imply the location where someone lives; hence it is not possible with proper names of people. It is also not possible with Lokono names for professions derived with the agent nominalizer _–rhin_, for instance, _yokhârhin_ ‘hunter’ (from _yokhan_ ‘hunt’). This may be attributable to the fact that most of such professionals cannot be associated with a specific location (e.g., _kodârhin_ is ‘someone who is good at weaving’ not ‘someone who works at _nakodânale_ their weaving place’). It is possible that the exceptional case of _datra_ is a case of semantic borrowing. The word _datra_ refers to both the person and the institution in the source language Sranantongo. Small clinics, in which such doctors work, in Sranantongo and Surinamese Dutch called _poli_, are now found in most Lokono villages. On the other hand, the Lokono medicine men called _semethi_ have become a thing of the past. In any case, the combination _semethin_ with the _where_-marker was rejected by the consultants, even though the medicine men did have their own workshops where they practiced their art. Importantly, the differential use of the _what_- and _where_-markers shows that the _what_/where_ distinction is productive and can be applied to new lexical items, such as borrowings.
7.3.4.2 Object-denoting nouns

Object-denoting nouns belong to the what-category. Van Baarle and colleagues (1989: 76), however, give an example of a what-noun appearing with the where-marker—namely, koyarha ‘dugout canoe’. According to the authors, when combined with the where-marker, the combination koyarhan implies that the location or goal is a static canoe. On the other hand, when combined with the what-marker, the combination koyarha bithiro implies that the location or goal is a canoe that is moving. Nevertheless, it is interesting that at least to some speakers the combination is acceptable, and that the relevant parameter is motion or movability—a parameter that appears both in Lyons’ analysis of first-order entities and in Talmy’s definition of prototypical Figures and Grounds.

From the data collected in Suriname, an interesting pattern appears when a place is named after an object-denoting noun. In Lokono this is quite common as many creeks and their parts are named after particular trees. Take as an example the noun ôlo denoting a species of the Trattinnickia genus. When referring to a particular exemplar of the species, ôlo follows the usual pattern of what-nouns. It combines with the what-marker in the goal and location directionality, as in (286).

(286) Thôsa ôlo bithiro.
ôlo-LOC.WHR 3PL.-breathe=REM,PST
‘She went toward the tree (Trattinnickia species).’

However, there is also a creek in the Cassipora area called Ôlo named after the trees that flank its banks. The creek used to be a resting area for hunters coming back home from long hunting trips. As a proper place name, Ôlo combines with the where-marker as in (287).

(287) Ôlon nâkuba koba.
ôlo-LOC.WHR 3PL.-breathe=REM,PST
‘Long time ago they rested at the Ôlo creek.’ (Cassipora, 2012, narrative)

The combination Ôlon cannot encode location or goal if a particular exemplar of an ôlo tree is the Ground. This type of semantics must be expressed either by the what-marker or by a combination of a specific configurational noun with the where-marker, as is the case with other what-nouns. The combination Ôlon implies to referent of the noun must be a place (i.e. a creek), not an object (i.e. a tree). The shift from the what-marker to where-marker results in this case in the change of the referent from an object to a landscape feature named after the object. It is not clear how productive this pattern is today, but it is strikingly similar to the datra case, in which case a place is named after a person associated with it. In the corpus of place names a few examples of this pattern can be found (e.g., Kofa ‘creek named after Clusia species’; Pakorhi ‘village named after Platonia insignis’; Hobo ‘creek named after Spondias mombin’). Due to linguistic and cultural loss, however, many place
names have been forgotten and new places are often named in Sranantongo or Dutch instead of Lokono (see chapter 6).

7.3.4.3 Relational nouns

Relational nouns denote parts of entities and normally combine with the what-marker or a configurational noun, followed by the where-marker, as is typically the case with what-nouns. This is exemplified in (288), in which the Goal of motion is the body part koti ‘foot’.

(288) *Thurhibiswâ dakotî bithîro.*

\[
\text{tî–tîbiswa} \quad \text{da–kutî} \quad \text{bitî–ro}
\]

\[
3\text{F}_{\text{A}}–\text{roll.REFL} \quad 1\text{SG}_{\text{A}}–\text{foot} \quad \text{LOC.\text{WHT}–ATL}
\]

‘It rolled toward my feet.’ (Cassipora, 2010, elicitation)

However, there are some relational nouns that readily combine with the where-marker as well. The attachment of the where-marker directly to such nouns has an interesting effect. A what-marked relational term is used when the location or goal is the named-part itself (e.g., *duna bithiro* ‘toward the arm, side’). A where-marked relational noun, on the other hand, implies that the location or goal is the spatial region that is adjacent to or projected from the part (e.g., *dunanro* ‘toward the side of’). This is exemplified in (289).

(289) *Addayali shikwa dunan*

\[
\text{addayali} \quad \text{ʃikwa} \quad \text{diná–ŋ}
\]

\[
\text{God} \quad \text{house.REFL} \quad \text{arm–\text{LOC}–\text{ATL}}
\]

‘at the side of the church’ (lit. at the arm of god’s house)

In (289), the goal of motion is not the part of the building itself, but a spatial region projected from the side. Relational nouns that have been attested with the where-marker include terms such as *shiri* ‘nose’, *shi* ‘head’, *shibo* ‘face’, *toro* ‘heel’, *duna* ‘arm’, *koti* ‘feet’, *rhebo* ‘edge’, *boloko* ‘tip’, *anaku* ‘middle’. Through the attachment of the where-marker, the relational nouns in question become de facto configurational nouns expressing intrinsic spatial relations—that is, spatial relation established by projecting a spatial region form the relevant part. It should be mentioned that the development of configurational terms from relational nouns, including body part terms, is a cross-linguistically attested phenomenon (e.g., Heine, Claudi, and Hünnemeyer 1991; Heine 1997).

7.3.4.4 Landscape nouns

Nouns denoting landscape features normally combine with the where-marker. However, some of them can combine with the what-marker typical of object-denoting nouns. The landscape term *horhorho* ‘landform’, for instance, normally appears with the where-marker, as in (290), which comes from a description of a
drawing showing a hill. The speaker here narrates his imaginary travel though the depicted landscape.

(290)  *Dirhibiswa horhorhonro.*

\[d-ɨɨbiswa \, \,  hoɾoɾo-\, \, n-ro\]

\[1SG.A-ROLL.REFL \, \, LANDFORM-LOC.WHR-ATL\]

‘I rolled toward the landform.’ (Cassipora, 2012, elicitation)

The landscape term *horhorho* ‘landform’, described in detail in chapter 4, can refer to any type of landform, and typically combines with the where-marker, as in (290), where the phrase *horhorhonro* encodes the goal of motion: the bottom of the valley. However, if one talks about a landform on a map or a landform viewed from a distant place, the what-marker can be employed, as in (291).

(291)  *Dadukha aba waboroko horhorho bithiro.*

\[da- dik’a \, \, aba \, \, waboroko \, \, hoɾoɾo \, \, bitʃi-ro\]

\[1SG.A-SEE \, \, INDF \, \, ROAD \, \, LANDFORM \, \, LOC.WHR-ATL\]

‘I see a road toward the landform.’ (Cassipora, 2012, elicitation)

In this case, the what-marker triggers the reading of a perceptually more bounded instantiation of a landform—that is, one that fits within the visual field—or an object that represents a landform on a map. In both cases, rather than a large-scale landscape feature, a delimited object is implied. This contrast can be captured well with questions. *Horhorhonro* is an answer to the question about a place: *Halonro?* ‘Toward where?’ *Horhorho bithiro* is an answer to the question *Hama bithiro?* ‘Toward what?’ It remains unclear how productive this type of semantic shift is; it is also attested with the noun *onikhan* ‘creek’ and *konoko* ‘forest’.

7.3.4.5  Indefinite pronoun *aba*

Lokono numerals are classified as nouns. Not surprisingly, they share the capability to combine with the location and goal directionality markers. Interestingly, the numeral *aba* ‘one’, which functions as the indefinite pronouns, can combine with the where-marker, typical of the where-nouns. The resulting combination *aban* means ‘somewhere’ and refers to a place. In (292), the speaker describes the travels of the ancestors of Cassipora, who moved from one location to another, before finally settling down where the present village is located.

(292)  *Nashifodâka abanro kiba.*

\[na-ʃifod-\, \, a-\, \, ka \, \, abå-n-ro \, \, kiba\]

\[3PL.S-TURN.INTRV-PFV \, \, INDF-LOC.WHR \, \, AGAIN\]

‘They turned around toward somewhere again.’ (Cassipora, 2011, narrative)

In (292) the combination *abanro* ‘toward somewhere’ with the atelic suffix encodes the goal of movement of the verb *shifodan* ‘turn around’. Importantly, the same pronoun combined with the what-marker implies that the referent is either a person,
animal, plant, or an object, but not a place. In (293), from the story in the online Appendix IV, the indefinite pronoun aba is additionally marked as masculine, therefore limiting the scope of referents to Lokono men only.

(293) Li abali bithiro thôsa.

\[
\begin{array}{llll}
\text{li} & \text{aba–li} & \text{bithi–ro} & \text{tʰ–o–sa} \\
\text{DEM} & \text{INDEF} & \text{LOC.WHT–ATL} & \text{3F–go}
\end{array}
\]

‘She went to the one man.’ (Cassipora, 2009, narrative)

In the case of indefinite pronoun aba the referent changes therefore in a predictable manner. When what-marked the indefinite pronoun indicates that the location or goal is a person or an object. If where-marked, the combination aban encodes a location or a goal that is a place.

7.4 Discussion

In the previous sections I demonstrated how the what/where distinction operates in Lokono. I first identified two types of nouns defined by the different location and goal directionality markers, and subsequently discussed a five cases of semantically motivated category shifts. In the present section, I discuss the data in the light of the bulk of knowledge about nominal categorization in general. The main aim is to show the parallels between the what/where distinction and other types on nominal categorization, such as the mass/count distinction. Based on the preceding description, in the following sections I also put forward a few hypotheses about the what/where distinction in general that are put to the test in chapter 8, in which a comparative analysis of the dichotomy is presented.

7.4.1 Grammatical locus

The what/where distinction manifests itself in a specific linguistic context—namely, the directionality component of the spatial expression. In Lokono this distinction boils down to the use of the what- and the where-markers in the location and goal directionality. The markers used to be syntactically equivalent, but today the where-marker is a bound form –n, while the what-marker bithi is a free form. The explicitness of the directionality marking varies per language; the distinction may sometimes be obscured. In English, for instance, it is the anaphoric elements here/there/it/him/her used with the directionality markers that hint at the category membership. Not surprisingly therefore Whorf’s (1945) observations about nouns denoting cities and countries led him to call this group of nouns a cryptotype. On the other hand, in other languages the distinction may be absent or one of the categories can include virtually all nouns.

93 Noun categorization is understood here in a general way. A nominal category is defined by the equivalent treatment of its members by a certain linguistic feature. This definition only partly overlaps with the more specific idea of noun classification (cf. Aikhenvald 2003).
However, the specificity of the locus of the what/where distinction does not make it any different from other noun categorization systems. The mass/count distinction, for instance, manifests itself only in the case of quantification. Both quantification and directionality are cognitive universals, clearly related to the distinctions they host. Importantly, just like quantification in the case of the mass/count distinction, directionality is a cross-linguistically attested locus of the what/where distinction. A preliminary survey of the grammatical descriptions of typologically distinct languages shows that, in spite of the vast differences in the expression of directionality, the what/where distinction reappears only in this context (Bowern 2012; Buell 2007; Hill 1996; Huber 2014; Woodbury 1975). Future research should focus on the interaction of the different directionality distinctions with the what- and where-nouns. It should be determined how the fact that the what/where distinction is usually found in the location and goal directionality and not in the source or via directionalities relates to the body of literature about the cognitive goal bias (cf. Kopecka and Narasimhan 2012, Part II).

7.4.2 Internal structure

In analogy to the mass/count distinction, the what/where opposition is organized around two extremes, the what-extreme and the where-extreme. However, the internal structuring of the categories is more complex. In the what-category, person-denoting nouns, pronouns, demonstrative pronouns, the question words halikan ‘who’, hama ‘what’, and the noun hamathali ‘thing’ receive a special status. Only these nouns can combine with the what-marker in its telic and atelic form. This internal division is not surprising, if one recalls the special status of person-denoting nouns (Lyons 1977:442–443), and it can be expected to reappear in other languages. It is, however, unclear why hama and hamathali, which do not refer to people, but to objects are found in this subgroup. Interestingly, the remaining what-nouns, if used in the telic mode require a configurational noun. This is reminiscent of the use of mensural terms with mass nouns, if there is a need to quantify them. Both configurational nouns and mensural expressions form a possessive phrase with the relevant noun from one category, rendering the expression compatible with the markers of the other category.

Similarly, within the category of where-nouns, configurational nouns have a special status. In this case, the where-marker can be dropped in the telic mode. This subcategory includes nouns that are to some extent inherently spatial, and languages will differ as to what falls into this subgroup, if such a subgroup is distinguished. Finally, the very extreme of the where-category—that is, deictic terms—can in fact easily escape attention, as they may be quite far removed from prototypical nouns, and be classified as adverbs or even verbs.

Importantly, the internal structuring of the two categories as well as the existence of borderline cases imply that nouns can be ordered from those that typify one extreme or the other, forming a cline. Languages, in turn, choose where to place the

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94 Notice that in English container Grounds, also do not necessitate the directionality goal preposition to, for instance, *Put the bunny back into/in the box* (Nikitina 2008).
290
cut-off point on the cline. The precise membership of the categories will therefore be
language-specific, just as in the case of the mass/count distinction. Nonetheless,
there will be cross-linguistic tendencies as to what terms fall into which category
due to the ontological basis of the distinction. I hypothesize that telicity interferes
with the two categories, since it is a part of the directionality paradigm that is
inextricably linked to boundedness, which is one parameter that clearly underlies the
distinction. The role of telicity, however, is not yet clear.

7.4.3 Ontological basis
Some what- and where-nouns are flexible and allow for category shifts. Just as in
the case of category shifts in the domain of countability, the change of the category
results in systematic semantic changes. At its most extreme, in the mass/count
distinction this takes the form of the so-called Universal Grinder (Pelletier 1975).
Pelletier notices that most count nouns can be forced into a syntactic frame of a
mass noun, resulting in a change of meaning, as in At the site of the accident, there
was dog all over the street. In the case of the Universal Grinder a count noun
receives a mass reading when placed in the syntactic frame of a mass noun. In the
borderline cases discussed above, the change of the category from what to where
involves a shift from a perceptually more bounded and more delimited entity
(person, object, object part, feature on a map) to a perceptually less bounded and
less delimited entity (building, institution, place, spatial region, real landscape
feature). The change to the where-category often entails larger size, and immobility.
The systematic semantic changes suggest that the what/where distinction has an
ontological basis. This insight appeared already in the theoretical work of Lyons
demonstrated similar category shifts and argued also for their ontological basis in
the Marquesan language. It remains an open question how systematic the changes
are. In other words, it should be investigated whether we can speak of a Universal
Localizer analogous to the Universal Grinder in Lokono and other languages. The
shift from an object-denoting noun to a place named after the object is one possible
candidate for such a construction (§ 7.3.4.2).

7.4.4 Functional load
I hypothesize that the what/where distinction is a reflection of the noun’s likelihood
of functioning as the Figure or the Ground. Though Figure/Ground constellations are
relative, on the level of the human experience of the world, or to be more precise the
Lokono experience of the world, some constellations are more likely than others.
The what/where distinction manifests itself in the spatial expression, the sole
function of which is to encode the spatial relation between Figures and Grounds.
Importantly, a tendency can be noticed regarding the form of the markers. What-
nouns receive more overt marking than where-nouns. In the former case, a disyllabic
free form bithi is used; in the latter the suffix –n appears. Moreover, the more
inherently spatial the noun, the less marking, therefore, configurational nouns can
optionally drop the telic marker. Deictic terms—which have lost their nominal
character—remain unmarked in the telic directionality. In other words, what-nouns
require special linguistic means to function as the Ground, while where-nouns necessitate less, and sometimes even no marking at all to function as the Ground. These formal tendencies go hand in hand with the changes in the ontological properties of the referents. Perceptual boundedness and the (often) concomitant capability of displacement, small size, and crisp boundaries appear to typify the referents of what-nouns. Lack of these features is associated with where-nouns. As such, the what/where distinction is an indicator of how marked a noun has to be in order to be used as the Ground in a spatial expression. In chapter 8, I look in more detail at the nominal spectrum ranging from what- to where-noun in three languages, demonstrating that cross-linguistically the distribution of nouns in the two categories is not accidental, but indeed forms a cline from prototypical Figure-denoting nouns to prototypical Ground-denoting nouns.

The question remains why languages have this distinction in the first place. In his overview of noun classification Senft (2010:678) reminds us of Greenberg (1978), who noticed that nouns are particularly notorious for being the locus of categorial distinctions. This categorial richness of nouns has been attributed to their discourse persistence. In Greenberg’s (1978) view, categorization helps delimit the reference of a noun and keep track of it as the discourse unfolds (see also Corbett, 1991 on gender). Two facts support the hypothesis that this may motivate also the what/where distinction. First, it should be kept in mind that spatial language may be central to language structure at large (the localist view) and to language development (Piaget and Inhelder 1997). Second, it is evident that the Figure/Ground constellation lies at the heart of spatial language and cognition. The two facts and the Greenbergian discourse persistence of nouns may explain why nouns are categorized as denoting the what and the where—that is, as prototypical Figures and as prototypical Grounds.

7.5 Conclusions

In the linguistic literature, little systematic attention has been paid to the what/where distinction, especially from the perspective of nominal categorization systems and its cross-linguistic manifestations. In this chapter, I have discussed the what/where distinction, as it operates in Lokono, and demonstrated its similarities to other nominal categorization systems such as the mass/count distinction. I argue that the what/where distinction encodes the likelihood of a noun functioning as the Figure or the Ground in the spatial expression. What-nouns encode entities that are prototypical Figures, while the where-nouns encode entities that are prototypical Grounds. Both categories are internally complex. The what/where distinction is found in the cognitively universal directionality component of the spatial expression, and takes the form of the differential directionality marking. Nouns belonging to the where-category are less marked than nouns belonging to the what-category. The distinction is semantically motivated and based on the ontological properties of the referents. This becomes evident in the situations in which category shifts are

95 Though notice verb classification (e.g., McGregor 2002).
possible, resulting in systematic changes in meaning. More perceptually bounded entities tend to belong to the *what*-category, and less perceptually bounded entities tend to belong to the *where*-category. Future research should determine what is the relation of the distinction to other cognitive systems and processes. Bearing in mind the role of spatial language, and the Figure/Ground constellations in particular, as source domains for the structuring of other domains, far reaching ramifications can be expected.