

## Project description 'Bantu Syntax and Information Structure'

This document provides a more in-depth description of the background, aims, and methods of the BaSIS project, largely based on the grant application for the NWO Innovational Research Incentives Scheme (Vidi). The project is led by Dr Jenneke van der Wal and carried out at the Leiden University Centre for Linguistics.

### 1. Background, aims and relevance

One of the main functions of language is to express information about events: 'who did what (with/to whom)'. This information consists of two components: semantic roles and discourse salience. First, language defines the semantic roles of noun phrases with respect to the main verb: in *The princess kisses the frogs*, the princess is the agent of the kissing action, and the frogs are the patients. Language also conveys discourse salience: if *the princess* and *the frogs* have been mentioned in the discourse before, they are already active and salient in our minds, whereas if they are newly mentioned they will gain salience. Noun phrases in all sentences have both a semantic role and a certain discourse salience status, and this is true crosslinguistically.

Languages vary considerably in *if* and *how* they express semantic roles and discourse salience. In many languages semantic roles are related to grammatical roles such as subject or object. In Lakhota, for instance, agents take the subject-form and patients the object-form. Hence 'I walked' is rendered as 'I walked', because walk has an agent-subject, but 'I fell' is rendered as 'me fell' because falling is not an agentive action (Mithun 1991). Most European languages share this trend for mapping between semantic roles and grammatical roles, even if the correlation is not one-to-one (e.g. in a passive clause *The frogs were kissed*, the patient is the subject). Generalising, in these languages 1) noun phrases have a semantic role that indicates their participation in an event, and 2) these roles correspond to a greater or lesser degree to a grammatical role that determines its function in the syntax of the sentence. Or in generative syntactic terminology: the syntax in these languages uses abstract Case to license a noun phrase.

The impact of syntactic licensing is in turn visible in the word order, agreement on the verb, the form of the noun (case), and participation in syntactic operations (morphosyntactic properties). For example, in Latin the word 'frog' surfaces with nominative case as *rana* when it is the subject, and with accusative case as *ranam* when it is the object. In English, the subject noun phrase precedes the verb and determines the agreement on the verb: *The princess kisses the frogs* (not 'kiss'). Traditionally, linguistic models (as in Figure 1) are to a large degree based on these languages, and they are intended as universal models.

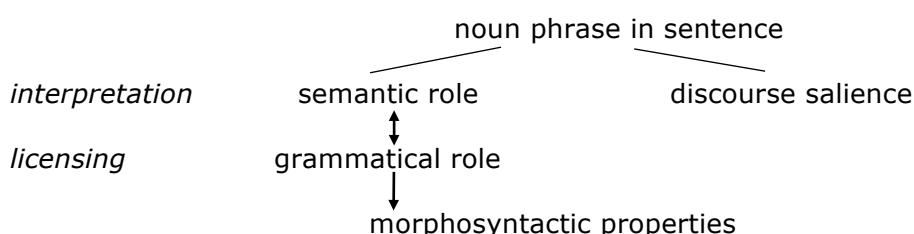


Figure 1 Nominal licensing

However, not in all languages are verb agreement, word order, or case determined by semantic or grammatical roles as we know them. For example, Polynesian (Mosel & Hovdhaugen 1992, Naess 2011), Arawak (Aikhenvald 2003, 2007), Tibeto-Burman (Li & Thompson 1976) and Bantu languages show an uneasy fit with theories of nominal licensing. In many Bantu languages verb agreement is not necessarily with the logical subject or agent, nor does word order reflect these roles. To illustrate, in (1a) the verb agrees via the prefix *ba-* with the agent 'boys', but in (1b) it agrees via the prefix *si-* with the instrument 'spoon' (see references in Marten & Van der Wal 2015 on subject inversion):

(1) a. Aba-fana ba-dla nge-sipunu. [Zulu, based on Zeller 2012]  
 2-boys 2-eat with-7.spoon  
 'The boys are eating with the spoon.'

b. Isipunu si-dla aba-fana.  
 7.spoon 7-eat 2-boys  
 'Boys are using the spoon to eat.' (lit. 'The spoon is eating boys.')

This triggers questions for a syntactic account of inversion constructions: what determines verb agreement, if not nominative Case? How is the postverbal logical subject licensed? Inversion is only one example where Bantu languages do not fit current theories of nominal licensing. They diverge in many other grammatical phenomena as well, for example object marking (e.g. Riedel 2009, Bax & Diercks 2012, Zeller 2014) and the form of the noun (e.g. Hyman 2017, Hyman & Katamba 1993, Baker 2003, Halpert 2013, 2015, Schadeberg 1986, Watters 1979); see further 'Prediction B' below.

Therefore, the key question is what controls word order, agreement, case and syntactic operations in languages where abstract Case licensing as we know it from European languages seems unimportant. Since we know that the morphosyntactic properties of these languages are not random or unconstrained, there must be some system of nominal licensing. Now, if nouns in a sentence have both a semantic role and a discourse salience status, then it stands to reason that either or both of these can grammaticalise to a formal syntactic system of nominal licensing. In example (1) above, it is indeed discourse salience that determines verb agreement and word order. The preverbal agreeing noun (John or spoon) constitutes the given information (known as the 'topic'), and the postverbal element forms the new information (known as the 'focus') of the sentence. Building on research concerning the influence of discourse salience in the grammar of these languages (see 'Prediction A' below), **the hypothesis in this project is that there exists a salience-based counterpart to grammatical role licensing** (cf. Good's 2016 'Parapragmatic Case'). This is represented in Figure 2. The figure also shows the presumed continuum of crosslinguistic variation in the influence of these roles (further discussed below).

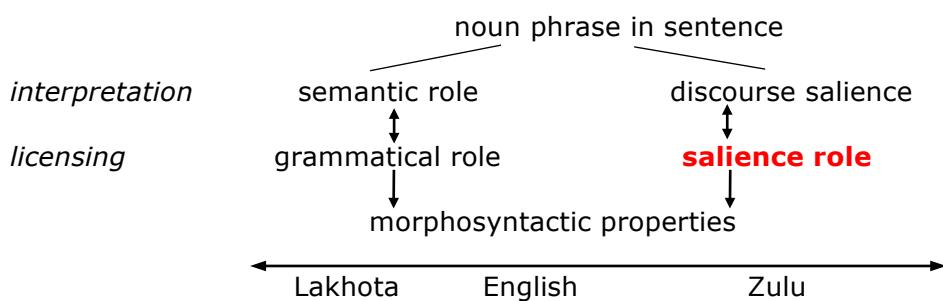


Figure 2 A broader view of nominal licensing

The aim of the current project is to systematically examine the properties of salience role licensing and its language-internal and crosslinguistic variation, answering the following **research questions**:

1. **How does the grammar license noun phrases in languages where traditional grammatical roles seem unimportant?**
2. **What is the interaction between the two licensing systems?**
3. **How can the crosslinguistic variation in nominal licensing best be modelled?**

It is important to answer these questions to fully understand how human language expresses information. Our current view of nominal licensing is skewed, with most European languages on the left or centre of the continuum in Figure 2. The system of grammatical roles (as a basic or derived notion) is thus described in depth, and forms the basis of many current linguistic theories and typological generalisations. However,

languages on the right end of the continuum are usually not included in these theories or are forced into ill-fitting models. It is essential that these languages are taken into consideration so that our model is capable of explaining the licensing conditions of all languages on the continuum.

## 2. Method

If licensing is based on discourse salience (also called 'information structure'), there are two clear predictions for its impact on the morphosyntax, that can be tested in the Bantu languages (see 'The language laboratory' below):

- A. Discourse salience licensing will systematically affect verbal agreement, and/or word order, and/or the form of nouns;
- B. Syntactic operations typically showing the effects of abstract Case work differently.

### **Prediction A: Salience.**

The relevance of discourse salience to syntax has been known for some time; most notably Li & Thompson (1976) proposed that languages can be 'topic prominent' or 'subject prominent'. Subsequent research has made a lot of headway in studying salience in the grammar, especially when earlier intuitions were formalised in proposals for a 'discourse-configurational' language type (É.Kiss 1995, cf. Mithun 1987, Dryer 1997 and others - see a recent overview in Paul & Whitman 2015) and analysed in detail in cartographic research (starting with Rizzi 1997). Only recently have proposals been presented that suggest a more profound crosslinguistic difference in the grammar, for example arguing that agreement and/or movement can be sensitive to information structure (e.g. Morimoto 2006 on Bantu 'topic agreement'; Miyagawa's 2010 discourse features), or abolishing the traditional grammatical role licensing system (Diercks 2012, Carstens 2011). The current project seeks to further these insights by examining how information structure is active in nominal licensing, in individual languages as well as crosslinguistically.

The impact of salience roles on the morphosyntax will be tested by investigating different types of salience, answering the following subquestions:

- A1.** By which grammatical means do languages express different types of salience?
- A2.** Are there implicational relations in which types of salience are marked, and how they are marked?
- A3.** Which types of salience play a role in licensing (if any)?
- A4.** Does salience interact with functional categories, and if so, which?

Recent advances in methodology make it possible to define and identify categories of information structure that go beyond topic and focus (e.g. Skopeteas 2012, Van der Wal 2016). Following Naess (2011), I distinguish between referent-determined salience and speaker-determined salience.

Referent-determined salience concerns the relative mental accessibility of a referent (Gundel et al. 1993, Lambrecht 1994, Ariel 2008), i.e. how active the referent is in the hearer's mind; this covers primarily topicality. The following categories will be examined:

highly active (familiarity topic, non-comment)	referent is recently and repeatedly mentioned
subset of active referent (contrastive topic)	X1 did A, X2 did Z
superset of active referent (hanging topic)	referent sets the stage, not selected by the verb
recent mention (shift topic, tail-head)	topic of sentence is different from topic of previous sentence
reduced activity (anti-topic/background)	referent has been mentioned before but is not currently active
brand-new referent/event (thetic sentence)	introduction/first mention of referent, usually at beginning of story, or out-of-the-blue context

Table 1 Categories of referent-determined salience (Gundel et al. 1993, Lambrecht 1994, adapted)

Speaker-determined salience concerns how the speaker directs attention to something new, contrasted or unexpected; this covers primarily focus. Assuming Rooth's (1985, 1992, 1996) definition of focus, a focused (speaker-salient) noun phrase triggers a set of alternatives. Thus, saying 'I ate PANCAKES' triggers a set of alternative things I could have eaten, like caviar or lettuce. Bazalgette (2015) further distinguishes four types of relations between the asserted focus and the alternatives: simple (just alternatives), implicational, identificational, and truth-conditional. All four can be identified by detailed diagnostics, as in Van der Wal (2016) and to be further developed in the project. A recently highlighted fifth category of speaker-salience is unexpectedness, for which Bianchi et al. (2015, 2016) and Garcia (2016) provide diagnostics.

The subtypes of salience will in this project be studied in spontaneous as well as elicited speech. The different grades of referent-salience are best investigated in larger stretches of spontaneous discourse and narratives (cf. Nicolle 2015). These will be recorded and transcribed, and then analysed for referent tracking and other information-structural features. This is complemented by tailored test materials (mostly for speaker-based salience) to be created within the first year of the project, building on the Questionnaire on Information Structure (QUIS, Skopeteas et al. 2006) and the Semantic QUIS (Renans et al. 2011), and incorporating the latest insights and experimental methods.

### **Prediction B: Syntactic operations.**

Potential remaining effects of grammatical roles can be tested in operations usually associated with grammatical roles and Case licensing (see further Diercks 2012, Van der Wal 2015, Sheehan & Van der Wal to appear), including:

- *Passivisation*. Since passives canonically affect the grammatical roles of subject and object, passives may be expected to either not be present in a salience-based language, or to be sensitive to discourse salience instead. Evidence for both is found in (pseudo)passives in Basaa (Hamlaoui & Makasso 2013), Mbuun (Bostoen & Mundeke 2011), Bemba (Kula & Marten 2010), and Matengo (Van der Wal 2015b).
- *Raising* from finite and non-finite clauses. If Case licensing does not play a role, "subject" DP can remain in non-finite clauses, e.g. *It seems the cat to sleep*, and (hyper)raise from finite clauses, e.g. *The cat seems that sleeps*. This is true for a number of Bantu languages (Diercks 2012, Carstens & Diercks 2013).
- *Adverbial/argument distinction*. There is traditionally a difference between argument DPs that need to be licensed by core clausal heads, and adjoined adverbials that are inherently licensed. In salience-based languages the boundary may be fuzzier, with adverbials behaving like arguments (Nkemnji 1995).
- *Extraction*. Subjects are more accessible to relativisation than objects and obliques (Keenan & Comrie 1977), but this may also be freer in salience-based languages; an interesting topic here is anti-agreement (Schneider-Zioga 2007, Henderson 2013).
- *Transitivity*. The DPs required or licensed by a predicate can be dependent on information structure, as seen in the conjoint/disjoint alternation in Bantu (Van der Wal & Hyman 2017) and non-canonical applicatives (Marten 2003, Creissels 2004, Marten & Mous to appear).

## The language laboratory

The proposed research examines nominal licensing by focusing on the Bantu languages. While they are not exclusive in showing the influence of salience on the grammar, the Bantu languages form a particularly fruitful testbed for the hypothesis. This is, first, because they show overt morpho-syntactic marking of information structure (Güldemann et al. 2015, Van der Wal 2015a, Downing & Hyman 2016). This makes the expression of information structure more easily identifiable. Second, the potential crosslinguistic variation in licensing properties will only be maximally clear if other grammatical differences are reduced to a minimum (Cinque & Kayne 2005). This again makes the Bantu languages a perfect laboratory: it is a close-knit subfamily showing very similar basics (agglutinative morphology, SVO basic order) and yet there is much microvariation (Marten et al. 2007, Marten & Kula 2012, Marten & Van der Wal 2015, among others). This in turn means that we can expect to see not only languages towards the right end of the continuum but also more towards the centre, with 'mixed' systems of licensing, allowing us to see the interaction between the two systems. The Bantu case studies thus form a start for further crosslinguistic study (e.g. where Chinese or Hungarian would be on the continuum).

The project investigates nine different Bantu languages, selected on the basis of their geographical spread (see map) and their variation in relevant features (Table 2). The project develops a new approach for comparative study by closely collaborating with linguistic experts of these languages.

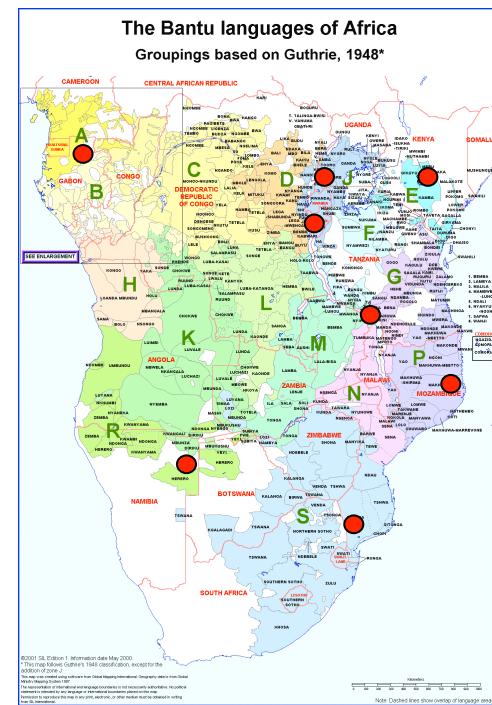


Table 2 Bantu languages to be studied

Language	Guthrie	Interesting features	Collaborator
Tunen	A44	(see subproject below)	(PhD project)
Kirundi	JD61	The apparently most freely available inversion constructions and a final focus position: ideal candidate for a pure salience role system?	Ernest Nshemezimana, University of Burundi
Nkore-Kiga	JE13/14	The augment on nouns is linked to specificity but also exclusivity: marking of both referent- and speaker- salience?	Allen Asiimwe, Makerere University
Kiitharaka	E54	Has predicate doubling and <i>ni</i> marker on V and N: interaction between word order and morphology in marking syntactic and salience roles?	Peter Muriungi, Chuka University
Nyakyusa	M31	Primarily intonational marking of salience: influence on licensing system?	Amani Lusekelo, Dar es Salaam UCE
Makhuwa	P31	Word order and verbal marking indicate discourse salience, but agreement is syntactic: half-grammaticalised salience?	(PI fieldwork)
Herero	R30	Has 'tone cases' and subject inversion: interaction between word order and morphology (cf. Kiitharaka)?	Jekura Kavari, University of Namibia
Changana	S53	Uses conjoint/disjoint alternation as well as an 'exclusive tense': how pervasive is salience in tense-aspect marking?	Aurélio Simango, UEM
Copi	S61	Indirect marking of focus via constituency in the conjoint/disjoint alternation?	Nelsa João Nhantumbo, UEM

### **3. Answers and challenges**

The results of the systematic tests will reveal for each language whether nominal licensing is determined by discourse salience at all, and if so, which types of salience are relevant and how they are marked (answering A1-3). Together with the possible effects in syntactic operations (B), we arrive at a full picture of nominal licensing in each language, and hence at a crosslinguistically comparative overview (research question 1). A challenge here is that all languages have ways to mark information structure (e.g. English also expresses focus), but not all languages have it encoded in their syntax (e.g. it could just be expressed in intonation). It is thus necessary to establish which part of discourse salience belongs to the syntax and which remains in pragmatics. The syntactic status can be detected in the interaction of salience with tense/aspect/mood, intervention effects, dummies, and obligatory marking (captured by A4, cf. Biberauer 2015).

Next, just as there may not be a straight one-to-one mapping between semantic roles and grammatical roles (viz. the passive 'The frogs were kissed'), the relation between discourse salience and salience licensing may not be perfect. This means that there is partial salience-sensitivity within and across languages, informing research questions 2 and 3. For example, objects may be determined by grammatical role licensing but subjects by salience licensing. Synchronously, this could be modelled by attributing different licensing abilities to different functional heads in the clause (extending Wiltschko's 2014 Universal Spine Hypothesis). Diachronically, agreement and case marking are known to develop from marking salience to marking case, and vice versa (Givón 1976, 1979, Dalrymple & Nikolaeva 2011). Languages in the centre of the continuum thus provide a unique chance to observe whether the development follows a systematic pattern, for example first involving referent-determined salience (as Naess 2011 suggests), or moving along an animacy hierarchy (as Morimoto 2008 suggests).

### **4. Research plan and implementation**

The project team consists of the PI, a PhD student, African collaborators, and the project advisors. There are two subprojects:

#### **Salient Bantu syntax (PI & collaborators)**

The main project will be carried out by the PI, collaboratively with 7 native speaker linguists at universities in Eastern and Southern Africa. This will allow ready in-depth access to a relatively large number of different languages, and result in systematic comparative data. Each collaboration will start with a one-month visit by the PI to the relevant African institution (one week introducing the methodology to the collaborators, and three weeks of joint and independent data-collection), followed by the collaborators carrying out part of the data analysis and writing up the results. Importantly, the data will be gathered using the same diagnostics for each individual language, allowing for a strict comparative analysis. The diagnostics will in the first year be further developed and fine-tuned with the help of advisors at the University of Potsdam. Other advisors of the project at SOAS and the University of Cambridge will provide input at later stages of the project.

The intention is to make the data openly available by the end of the project. Other planned outputs are joint publications involving the PI and collaborators (focusing on discourse salience and licensing in the various languages), an edited volume with chapters by each collaborator, as well as a monograph by the PI synthesising the theoretical results.

#### **The odd case of Tunen (PhD student)**

The aim of this subproject is to analyse the grammatical encoding of discourse salience and grammatical roles in Tunen in order to assess the influence of morphology on nominal licensing.

Unlike the other languages selected for the project, Tunen is a Western Bantu language, it has less agglutinative morphology than most Bantu languages, and has OV clause order (otherwise being head-initial). The question is whether and how this affects its nominal licensing. Tunen shows both Case licensing and discourse salience: On the

one hand, the agent seems to always be indicated as a subject (as a pronoun or on the inflected auxiliary), while on the other hand Tunen allows objects to be omitted, has a passive/middle that affects the agent but not the subject (Mous 2008), the position after the verb is for exclusive focus (Mous 1997, 2005), and it has a contrast marker *a*. The language thus forms an optimal test case as a language in the middle of the continuum, addressing research question 2. There is an existing set of texts (Dugast 1975, Isaac 2007) that will inform the study of discourse salience, and fieldwork will be undertaken in the second and third year for data collection using the explained methodology.

The result will be a comprehensive description of the syntax and information structure of Tunen, as well as an analysis of nominal licensing and morphosyntax in comparison to Eastern and Southern Bantu languages.

## 5. Outreach: Contributions to the Taalmuseum

The general public should hear more about how we can approach language as a subject of scientific study, and we need to increase the positive awareness of African languages. The project members will therefore participate in activities organised for this purpose, such as 'Bessensap', the 'Nacht van Kunst en Kennis' (in Leiden), and the 'Weekend van de Wetenschap'.

Specifically, the project will be involved in the [Taalmuseum](#) ('Language Museum') in Leiden. This is an initiative that was officially launched in September 2016. The Taalmuseum aims to 'increase the interest for languages and the role of language in various societies and cultures'. It will organise a yearly festival, for which this project proposes interactive sessions on the puzzles and patterns found in African languages (mostly resulting from our own research). The Taalmuseum also encourages a lasting online presence of the activities. After the interactive sessions in the festival, the contributions will be adjusted to be published online. This will serve to make African languages an integral part of the Taalmuseum and thus of the visitors' experience in learning about Language and language variation.

Graduate and undergraduate students will be involved in both the preparation of the interactive sessions and the conversion to a durable web presence. This will increase the diversity of the contributions, and it will provide the students with an opportunity to study an aspect of African languages while also developing their communication and presentation skills.

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