SOME NOTES ON NON-VERBAL PREDICATION IN BANTU

1. INTRO: HOW SMALL CAN A CLAUSE BE?

Stowell 1981, 1983: not only verbs have subjects. Predication is also possible in the absence of a verb:

(1) a. Alice became [SC t₁ president/the head of the association]. NP/DP predicate
    b. This proposition is/seems [SC t₁ preposterous/out of the question. AP/PP predicate
    c. [CP That Jessie should fight] was considered [CP t₁ obvious]. CP subject/ECM verb

Small clause: a minimal unit of non-verbal predication:

(2) a. VP
    DP    V
    Warwick   make
    SUBJ him   PRED king

Small clauses need not be complements of intensional verbs (cf. Moro 1995, Rothstein 2000):

(3) a. [With John sick], we’ll never get the job done on time.
    b. John left the room [PRO angry].
    c. [Me mad]?! Ridiculous!
    d. They hammered [the metal flat].

Stowell 1981, 1983: small clauses are maximal projections of the predicate:

Evidence from subcategorization: different verbs require different lexical categories:

(4) a. I expect [that sailor off the ship (by midnight).]
    b. *I expect [that sailor very stupid].
    c. *I expect [that sailor killed by the enemy].

1.1. Functional structure of a small clause

Bowers 1993, 2001 relying on Chierchia 1985, Chierchia and Turner 1988: predication must be mediated by a functional head, which has a semantic as well as a syntactic function.

Room for maneuver: There are small clauses with predicates containing a possessive, which is generally assumed to occupy [Spec, DP] – a position that would be reserved for a subject in Stowell’s approach. Likewise, [Spec, AP] is often filled by DegP (Bowers 1975, Jackendoff 1977, Heim 2000, Bhatt and Pancheva 2004, etc.), which would leave no room for the subject. If small clauses contain a functional projection, its specifier can host the subject.

(5) a. I consider [Josiah my best friend].
    b. Ayelet seems [t₁ much smarter than her friends].

Acknowledgments: We are very grateful to Leston Buell and Jochen Zeller for helping us with Zulu grammar, data, and native speakers. Unless marked otherwise, Zulu examples come from various online sources (mostly the online newspaper “Isolezwe”), Xhosa examples are due to Louw and Jubase 1978, Venda data come from Poulos 1990, and Swahili examples are from the Kamusi project (http://kamusiproject.org/grammar).
Coordination of small clause predicates of apparently different lexical categories is possible:

(6) a. I consider Fred **crazy and a fool**.
   b. I consider Mary both **shrewd and in the know**.

It is impossible to assign a label to the constituent formed by the coordination of X′ and Y′ which suggests that they should belong to the same category – hence a functional head should be present in the small clause (Bowers 1993, 2001).

NB: The status of the prohibition is unclear. It could be semantic: in other cases of coordination attempts there is also a clash in semantic type.

Svenonius 1994: the small clause **predicate can move**, which makes it a maximal projection:

(7) a. What does John consider Bill?
   b. How do you want your eggs?
   c. How famous did the incident make the criminal?

Possible alternative solution: raising-to-object (Postal 1974, see Runner 2006 for discussion) followed by movement of the entire SC

NB: It is likewise unclear whether the prohibition to move segments has any empirical support

The predicate of a small clause may receive a **special predicative case** (accusative in Arabic, dative in Hungarian, instrumental in Russian...):

(8) a. salma ŋayyanat wazir-an. Arabic
   salma nominate.CAUS-PRF minister-ACC
   Salma nominated her child to be a minister.
   b. walad-u-ha ŋuyina wazir-an.
   child-NOM-her nominate.PASS-PRF minister-ACC
   Her child was nominated to be a minister.

(9) a. Senat izbral Cezar′ a konsulom. Russian
   Senate-NOM chose-M Caesar-ACC consul-INSTR
   The Senate elected Caesar consul.
   b. Cezar′ byl izbran konsulom.
   Caesar-NOM was-M chosen-M consul-INSTR
   Caesar was elected consul.

A functional head is assumed to be necessary to assign that case (Bailyn 2001, 2002, Bailyn and Citko 1999, Bailyn and Rubin 1991, etc.).

Alternative: might be a lexicalization of [eventive] or some other feature in the context of the interpretable feature [PRED] (work in progress).

In many languages a **functional element** appears between the subject and (some categories of) the predicate (Bowers 1993, 2001):

   is Siôn PRT happy
   Siôn is happy.
   b. Y mae Siôn yn feddyg.
   PRT is Siôn PRT doctor
   Siôn is a doctor.

(11) a. Èmèrí *(yé) mòsèmòsè. Edo (Baker 2003)
   Mary PRED beautiful.A
   Mary is beautiful.
3-lion   PRED 3-Assoc 3-fierce
The lion is fierce.

b. M-kango *(ndì) m-lenje.
3-lion   PRED 1-hunter
The lion is a hunter.

The syntactic theory of mediated predication (Bowers 1993, 2001): Non-verbal predication must be mediated by a functional head Pred°. The small clause is a projection of this head (PredP).

(13)
\[
\begin{array}{c}
VP \\
V^0 \\
\text{consider} \\
\text{Marie} \\
\text{ø proud of her work}
\end{array}
\]

\[
\begin{array}{c}
\text{DP} \\
\text{Pred} \\
\text{Pred}° \\
\text{AP}
\end{array}
\]

Bowers’ proposal: APs, NPs and PPs do not denote predicates, but rather must be converted into predicates. The semantic function of Pred is therefore to create a predicate that could be combined with the subject.

NB: Both Bowers 1993, 2001 and den Dikken 2006 take the extreme position, though for different reasons: every kind of predication must be mediated by a functional head. We will not address this complication here.

1.2. Lexicalization of Pred°

Copular particles do not behave the same cross-linguistically (Pustet 2005, Stassen 1997).

Welsh: the particle \( \text{yn} \) ‘in’ appears only with NP and AP predicates, but not with PP (or VP) ones (Jones and Thomas 1977:47):

In Scottish Gaelic (Adger and Ramchand 2003) and Irish (Chung and McCloskey 1987), only NP predicates appear with the copular particle:

(14) a. Tha Calum ‘na thidsear. Scottish Gaelic, Adger and Ramchand 2003
be-PRES Calum in-3MSG teacher
Calum is a teacher.

b. Chunnaic mi Calum agus [e ‘na thidsear].
see-PAST I Calum and [him in-3MSG teacher]
I saw Calum while he was a teacher.

c. Tha Calum faiceallach.
be-PRES Calum careful
Calum is (being) careful.

The particle \( \text{na} \) corresponds to the preposition \( \text{ann} \) ‘in’ incorporating a possessive pronoun that agrees in \( \varphi \)-feature specification with the subject.

Adger and Ramchand 2003: NPs denote properties of individual entities, whereas APs, PPs and verbal constructions denote properties of individuals with respect to an eventuality.

The Scottish Gaelic pattern also occurs in Bantu languages, modulo some fine details.
If VPs, APs, NPs and PPs were all saturated properties that require combination with Pred\(^0\) to function as predicates, we would have expected either no differences with lexicalization of Pred\(^0\) or more or less random lexicalization (in some languages with VPs, in some with PPs and NPs, etc.).

1.3. **Pred\(^0\) in DPs**

Montague semantics presupposes that NPs (at least) underlyingly denote properties.

If, following Bowers, non-verbal categories create phrases that (before the introduction of the subject) correspond to the semantic type \(\pi\), then an NP has the semantic type \(\pi\). How do NPs combine with determiners and number inflection?

Likewise, if an AP is a property in Bowers’ sense, how can it become attributive? How does a PP become attributive? Obviously, some type conversion is necessary, and for APs and PPs it should be different from the one for NPs (to explain that the former but not the latter can function as modifiers, but only the latter combines with determiners).

This very much looks like putting the cart before the horse to me. We artificially give NPs, APs, PPs, etc., a semantic type that precludes their linguistic use and them convert them to a usable type.

\*NB*: Chierchia 1985, Chierchia and Turner 1988: a property is a propositional function (semantic type \(\langle e, p \rangle\)), which can be nominalized, i.e., turned into an individual. While in Chierchia’s story, properties (type \(\langle e, t \rangle\)) can become individuals (type \(e\)), in Bowers’ story they belong to a new type or sort \(\pi\), which, presumably cannot function as an argument of standard predication.

1.4. **Summary**

There is some syntactic evidence for the presence of a functional head inside small clauses. It is difficult to evaluate though what semantic function it has, whether its semantic function is always the same and whether it really has anything to do with converting lexical projections to semantic type of unsaturated properties (\(\langle e, t \rangle\)).

2. **BANTU NON-VERBAL PREDICATION 1.01**

Zulu and several related Bantu languages (Swahili, Venda and Xhosa) have an overt particle in primary non-verbal predication (i.e., copular sentences). Finer syntax of copular sentences in these languages raises interesting questions about the role of the copula.

3. **The Copular Particle**

The four languages studied differ with respect to which lexical categories require the copular particle:

- Zulu and Xhosa NP predicates appear with a copular particle; AP, PP and locative predicate appear without a copular particle
- Venda appears to require the copular particle with AP and NP predicates; PPs and locatives seem to be able to combine with the verb directly
- Swahili has an optional copular particle with AP and NP predicates. Locative and PP predicates disallow the copular particle

The morphology of the copular particle differs slightly across these languages.
3.1. Zulu copular particle and the predicate case


**NB:** As Zulu does not appear to have small clauses outside the copular constructions, no independent support for treating *ng-* as the copular particle could be found.

(15) a. Ngi- mu- hle. AP predicate: Zulu  
AGRS1SG- AA1- beautiful  
*I am beautiful.*

b. Ngi- ngcono. AP predicate: Zulu  
AGRS1SG- improved  
*I am better.*

c. Ngi ng- u- mfana. NP predicate: Zulu  
AGRS1SG- PRED- AUG- boy  
*I am a boy.*

In colloquial registers the copular particle may be omitted. However, the predicative status of the NP is marked by the downstep (and accompanying it breathy voice) realized on the noun class marker/augment (see, e.g., Cheng and Downing 2007):

**NB:** All nouns contain the nominal root and the so-called *noun prefix* (NPX). In addition they may be preceded by a noun class marker/augment (AUG), on which see von Staden 1973, de Dreu 2008. We set this complication aside here.

(16) a. u- mú- ntu  
AUG1-NPX1-person1  
a person

b. ↓ U- mú- ntu.  
AUG1-NPX1-person1  
*It is a person.*

**NB:** The default tone in Zulu is low (Buell 2005:80); the presence of an additional low tone in the copular construction is detectable as a downstep. According to van Eeden 1956, the vowel of the augment also lengthens. This is known as the **tonal case** (Welmers 1973:323, Schadeberg 1986).

Welmers 1973:323: **Shona** noun prefixes normally bear low tone, but acquire a high tone in the predicative position:

(17) a. mùnhù  
person

b. mùnhù  
person.PRED

Schadeberg 1986: in Umbundu, tone distinguishes three cases: nominative, accusative and predicative (with some syncretism depending on the presence of the augment). In particular, predicative case is characterized by a uniform high tone.

In spoken Zulu the copular particle is often omitted, leaving just the autosegmental low tone as a marker of predication.

AP, locative and PP predicates appear without a copular particle (see sections 6 and 7 below).

3.2. Xhosa copular particle

NP predicates are introduced by a particle agreeing with the predicate in noun class. If what follows the particle is a 1st or 2nd person pronoun, the particle shows person agreement with it. If the subject is a 1st or 2nd person pronoun, subject agreement is present:
(18) a. Ndi- ngu- mfundisintsapho. Xhosa  
AGR_SG-PRED1-teacher
I am a teacher.

b. Ndi- m.  
PRED_SG-1SG
It’s me.

c. Si- thi.  
PRED_PL-1PL
It’s us.

(19) m- na ndi- ndi- m, a- ndi- nga- wo, a- mantombazana  
1SG- EMPH AGR_SG-PRED1SG-1SG NEG- AGR_SG-PRED6-PRN6 AUG6-daughters
Me, I am me, I am not them, the daughters.


AP, locative and PP predicates appear without a copular particle (see sections 6 and 7 below).

3.3. Venda copular particle

Descriptively, in matrix clauses in the present tense 1st and 2nd person subjects combine with the predicate preceded by prefixal subject agreement. The invariable particle ndi is used with 3rd person subjects when the predicate is an AP or an NP:

(20) a. Ni vhafunzi. Venda  
AGR2PL missionaries
You are missionaries.

b. Mutukana ndi mu- vhuya.  
boy1 PRED AA1- good-natured
The boy is good-natured.

c. Mufunzi ndi tshihole.  
missionary1 PRED cripple7
The missionary is a cripple.

The particle ndi disappears in all other tenses.

The simplest analysis would seem to be that there is no copular particle in Venda; rather the third person agreement is impoverished and does not show noun class agreement. However, when the predicate is a locative or a PP, subject agreement is not deficient, and the same is true when negation is introduced.

(21) Vhana vha tshikolo -ni. Venda  
children2 AGR2 school -LOC
The children are at school.

Furthermore, in object-associated depictives no particle may be present (Pylkkänen 2002:34-35), suggesting that whatever ndi is, it does not correspond to Bowers’ Pred0:

(22) Nd- o- la nama mbisi. Pylkkänen 2002:34-35: Venda  
AGR_SG-PST-eat meat AA9-raw
I ate the meat raw.

This conclusion is confirmed by the absence of ndi in tenses other than the present (below).
3.4. Swahili copular particle

Swahili has three ways of constructing primary predication in the present tense:
- with the particle \( ni \) (except with PP and locative predicates)
- with subject agreement
- without anything (except with PP and locative predicates)

NB: The discussion is based on Steere 1884/1930, Loogman 1965, Brauner and Herms 1986, and Marshad and Suleiman 1991, unless otherwise noted.

\[
\text{(23) a. } \text{Shati } ni \text{ ø- } \text{chafu. Swahili shirt}_5 \text{ PRED } AA_{5-} \text{ dirty} \text{ The shirt is dirty.}
\]

\[
\text{b. Nguo } zi \text{ safi. clothes}_{10} \text{ AGR}_{10} \text{ clean} \text{ The clothes are clean.}
\]

\[
\text{c. Ali m- réfu. Marshad and Suleiman 1991:30 Ali } AA_{1-} \text{ tall} \text{ Ali is tall.}
\]

In other words, Swahili has an optionally overt copular particle with AP and NP predicates, which blocks the appearance of agreement on the null copula.

In all other tenses only the last strategy is used, which means that the function of \( ni \) is not comparable to that of a copular particle in Celtic languages, in Zulu or in Xhosa.

3.5. Summary

Only Zulu and Xhosa seem to have a real copular particle, appearing only with NP predicates and remaining obligatory in all tenses.

The fact that the copular particle can appear with NP predicates only suggests that it does not correspond to Bowers’ Pred\(^0\).

Adger and Ramchand 2003: the copular particle in Scottish Gaelic introduces an eventuality argument slot, which is required to enable predication. APs and PPs have such an argument slot underlyingly.

This analysis can be extended to all languages where NP predicates (and NP predicates only) require a copular particle.

Thus Zulu and Xhosa provide no evidence in favor of PredP or against it.

4. The copular verb

The standard descriptions of the four languages concur on the following points:
- The copula is null or absent in the present tense, both independent and participial
- In the past and future tenses the verb \( be/ba \) in Zulu (\( wa \) in Swahili, \( vha \) in Venda and \( ba \) in Xhosa) is used
- It denotes “be” or “become” in function of its syntactic environment (the presence or absence, respectively, of participial agreement on the predicate) or pragmatic factors (in Swahili, where there’s no syntactic alternation)
- In at least two of these languages (Swahili and Venda) negation can appear above or below it
- Complex tenses use it as an auxiliary
We will show that the “copula” here is a pure auxiliary whose function is to support tense and mood affixes.

4.1. The present tense

Like many other languages (e.g., Russian or Arabic), in the present tense no overt copula can be seen in Zulu or in the related Bantu language Xhosa:

NB: We use AP predicates to illustrate the point; NP predicates appear with a copular particle

(24) a. Ngi- mu- hle. Zulu
   AGRS1SG- AA1- beautiful
   I am beautiful.

b. Ngi- ngcono.
   AGRS1SG- improved
   I am better.

(25) a. Ndi- m- khulu kodwa nina ni- ba- ncinane. Xhosa
   AGRS1SG- AA1- big but 2PL AGRS2PL- AA2- small
   I am big but you are small.

b. Ndi- ntsundu.
   AGRS1SG- brown
   I am brown.

NB: Examples (a) above involve “agreeing adjectives”, showing that subject agreement is clearly distinct from agreement marking on the predicate itself. Examples (b) involve “non-agreeing adjectives”. In Swahili and in Venda agreement patterns are more complex, but point in the same direction.

Unlike with more familiar languages, the null present tense copula can serve as a support for person and number agreement. The subject agreement is distinct from the subject pronouns and is identical to the subject agreement marking appearing on lexical verbs.

In the present tense used in independent clauses (henceforth, independent present tense) in 3rd person subject agreement may be absent altogether (depending on the language).

In the participial present tense and/or under negation subject agreement is present throughout the paradigm (Buell 2005:105):

(26) e- ngu- muntu ongenalungelo Zulu
   PRT.AGRS1- PRED- person without.a.privilege
   her being unprivileged

The copular verb remains null.

Besides in adjuncts, participial tenses are used in complex tenses (continuous or pluperfect).

4.2. Tenses other than the present

Zulu, where the surface form of the main verb (ba or be) depends on a variety of factors, only confuses the issue, so we start with Xhosa.

(27) a. U- za ku- ba e- ngu- mfundisi. participial: be: Xhosa
   AGRS1-FUT- KU- COP PRT.AGRS1- PRED1- teacher1
   S/he will be a teacher.

b. U- za ku- ba e- m- hle
   AGRS1-FUT- KU- COP PRT.AGRS1- AA1- beautiful
   S/he will be beautiful.
(28) a. Ndi- za ku- ba ngu- mfundisi. independent: become: Xhosa
   AGRS1SG- FUT- KU- COP PRED1- teacher1
   I will become a teacher.

b. U- za ku- ba m- hle
   AGRS1- FUT- KU- COP AA1- beautiful
   S/he will become beautiful.

When the post-copular constituent is prefixed with participial agreement, the interpretation is stative; otherwise it is inchoative. Exactly the same pattern obtains in the past tense.

In Venda likewise, participial agreement prefixed to the non-verbal predicate gives rise to the stative interpretation, and its absence, to change-of-state one:

(29) a. Vele u do vha e mudededzi. Venda
   Vele AGRS1 FUT COP PRT.AGRS1 teacher1
   Vele will be a teacher.

b. Ndi do vha dokotela duvha linwe.
   AGRS1SG FUT COP doctor day  one
   I will become a doctor one day.

Swahili is different in that the interpretation of a past/future tense copular clause as dynamic (become) or stative (be) seems to be determined only by the context.

Finally, in Zulu the interpretation of the main verb as be or become also depends on the form of the agreement prefixed to the non-verbal predicate, but in addition, the surface form of the main verb distinguishes between the two cases:

(30) a. Lo mthetho u- zo- be u- ng- owuqala. Zulu
   this law 3 AGRS3- FUT- COP AGRS3-PRED- first.one
   This law will be the first one.

b. U- Pierre Mbarga u- zo- ba ng- umqeqeshi.
   AUG- Pierre Mbarga1 AGRS1- FUT- COP PRED-coach
   Pierre Mbarga will become a coach.

(31) a. U- zo- be u- m- khulu.
   AGRS3- FUT- COP AA3- big
   It will be big.

b. U- zo- ba m- khulu.
   AGRS3- FUT- COP AA3- big
   It will become big.

NB: The verb surfaces as [be] also in environments where the be/become distinction is irrelevant, which renders the matter more complicated. In addition, the truth conditions of be and become copulas in the past and future tenses are so similar that Zulu native speakers tend to confuse them in translation.

In the present tense the presence of ba is unambiguously interpreted as become. There is no agreement prefixed to the predicate:

(32) U- Latoya u- ba ng- owuqala u- ku- phum -a Zulu
   AUG1- Latoya AGRS1S- COP PRED- first AUG- INF- exit -FV
   Latoya is becoming the first to leave.

To summarize, descriptively, we obtain the following pattern:

(33) a. ba/vha/wa + PRT.AGRS + SC → be
b. ba/vha/wa + SC → become

How do we interpret this pattern?
4.3. What is ba/vha/wa?

Standard view: ba/vha/wa is the copula ‘be’.

In view of (32): ba/vha/wa is the change-of-state/inchoative copula ‘become’.

However, this verb, like the English be or the Dutch worden ‘become’, also functions as an auxiliary, whose interpretation depends on the tense of the lexical verb:

(34) a. Ngi- zo- be ngi- gijim -a. Zulu
AGR3SG- FUT- COP AGR3SG- run -FV
I will be running.

b. U- be e- khulum -ile.  
AGR3SG- COP PRT.AGR3SG- talk -RECPST
S/he had talked.

The lexical verb appears in the participial mood (which we now understand to be dependent mood).

(34) shows that the verb ba/vha/wa may be just an auxiliary with no lexical semantics at all.

4.4. Tense support

Suppose the verb ba/vha/wa means ‘be’, whatever it is that ‘be’ means:

✓ Transition in meaning from ‘be’ to ‘become’ is easy: it is enough to assume the presence of a perfective head somewhere in the structure

✓ The presence of an additional perfective head leads to the overtness of ba/vha/wa in the present tense with this meaning

✗ The presence of additional subject agreement marking prefixed to the predicate is inexplicable: more structure is expected with ‘become’ than with ‘be’. Assuming that the subject agreement appears on Bowers’ Pred⁰ doesn’t resolve the issue as no such agreement appears in Venda object depictives (Pylkkänen 2002:34-35)

✗ Independent evidence for the perfective head would be desirable, but in fact Zulu has an overt stative mood marker for inchoative verbs, not vice versa

Treating subject agreement as Pred⁰ leads to incorrect predictions:

✗ We expect it to appear in depictives (contra (22))

✗ We expect it to appear with become (contra (33))

Suppose the verb ba/vha/wa means ‘become’:

✓ Transition in meaning from ‘become’ to ‘be’ is less easy but possible if a perfect head is assumed to be invisibly present somewhere in the structure

✓ In the present tense the small clause combines directly with tense (T⁰) as has been proposed for Russian by Bailyn and Rubin 1991

✗ There might be some evidence for the existence of a perfect head in the relevant languages, as they have a remote part (presumably corresponding to the real past tense operator) and a recent past (possibly corresponding to present perfect), but see Buell 2005 (arguing against this hypothesis), and copular clauses can appear in both recent and remote past

✓ Paslawska and von Stechow 2003 assume the presence of a null perfect head in Russian
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The position of additional subject agreement marking prefixed to the predicate is inexplicable: if it were associated with the perfect head in the structure, it should have appeared above ba/vha/wa. Attempts to fix the problem while avoiding the violation of the head-movement constraint (Travis 1984) do not look encouraging.

The relevant structure would look like this:

(35)

\[
\text{TP} \quad \begin{array}{c}
\text{T}^0 \\
\text{AGR}
\end{array} \\
\text{ModP} \\
\text{AspP} \\
\text{FUT} \\
\text{Asp}^0 \\
\text{V}^0 \\
\text{SC} \\
\text{AGRS} \\
\text{VP} \\
\text{AGRPRED} \\
\text{PRT} \\
\text{NP}
\end{array}
\]

The proposal is tempting, but a better one is available.

**Suppose the verb ba/vha/wa is used as an auxiliary to support overt tense morphology:**

- The verb ‘become’ functions as a passive auxiliary in Dutch
- Its use as an auxiliary is independently attested in the Bantu languages considered
- Its appearance with non-verbal predication is predicted to be ambiguous between its lexical meaning (‘become’) and no meaning at all (when used as an auxiliary)
- Agreement marking is naturally explained if it combines with the null verb ‘be’
- We have to assume the existence of a null verb ‘be’, whose function is unclear, as it obviously doesn’t provide a phonological host for agreement marking. It might have been argued to introduce an eventuality argument needed to combine a small clause with tense, but then a different explanation must be sought for the function of the copular particle required with NP predicates (contra Adger and Ramchand 2003)

(36)

\[
\text{TP} \\
\text{T}^0 \\
\text{AGR}
\quad \begin{array}{c}
\text{ModP} \\
\text{AuxP} \\
\text{FUT} \\
\text{Aux}^0 \\
\text{V}^0 \\
\text{SC} \\
\text{AGRS} \\
\text{become} \\
\text{be} \\
\text{DP} \\
\text{PRT} \\
\text{NP}
\end{array}
\]

The question then arises why the null be can support agreement morphology but not tense and modality, and we observe that there appears to be cross-linguistic variation as to whether be is null throughout the present tense paradigm (e.g., Russian, Arabic or Maltese) or only in the 3rd person of the present tense (e.g., Hungarian).

A possible answer may come from the hypothesis (Zwart 1997) that tense suffixes in Swahili (and possibly other Bantu languages) are actually auxiliary verbs.
5. SOME CONCLUSIONS

Data from Swahili, Venda, Xhosa and Zulu provide support for some theories of non-verbal predication but not for others:

- No evidence for (or against) PredP can be detected.
- The existence of two syntactically different classes of adjectives (see section 6) lends support to their treatment as a separate lexical category beyond lacking features [N] and [V] (contra Baker 2003).
- NPs appear to require some functional category to function as predicates, which APs and PPs do not seem to need.
- Apparent distinction between the copular verb and tense/mood support casts some doubts on the usual treatment of the copula as a lexically empty element needed only to support inflection.
- Given the connection between “subject agreement” and topicalization, many new questions arise with respect to what happens in less usual copular sentences.
- The role of the copular particle appearing with NP predicates remains unclear.

6. ADJECTIVE AGREEMENT

In three out of the four languages considered here adjectives fall in two different categories: agreeing and non-agreeing adjectives:

6.1. Zulu adjectives

Just like NPs, Zulu AP predicates take a null copula in the indicative present tense. Subject agreement appears only in the 1st and 2nd person (Buell 2005:104):

(37) a. Ngi- m- ncane.
    \text{AGR}_1\text{SG} \text{ AA}_1- \text{small}
    \text{I am small.}

b. Si- ba- ncane.
    \text{AGR}_1\text{PL} \text{ AA}_2- \text{small}
    \text{We are small.}

c. U- m- ncane.
    \text{AGR}_2\text{SG} \text{ AA}_1- \text{small}
    \text{You (sg.) are small.}

d. Ni- ba- ncane.
    \text{AGR}_2\text{PL} \text{ AA}_2- \text{small}
    \text{You (pl.) are small.}

(38) a. M- ncane.
    \text{AA}_1- \text{small}
    \text{S/he is small.}

b. Ba- ncane.
    \text{AA}_2- \text{small}
    \text{They are small.}

c. M- n cane.
    \text{AA}_3- \text{small}
    \text{It is small.}

d. Mi- ncane.
    \text{AA}_4- \text{small}
    \text{They are small.}

Zulu adjectives are commonly divided into two different categories: agreeing adjectives (or verbal adjectives, or adjectives per se) and non-agreeing adjectives (or relative adjectives, or nominal adjectives) (Doke 1927, Posthumus 2000, Stassen 1997:168)

“Agreeing adjectives” form a closed class.

Only “agreeing adjectives” appear with an agreement marker beyond that of the null copula:

    \text{AGR}_1\text{SG} \text{ AA}_1- \text{beautiful}
    \text{I am beautiful.}
b. Ngi- ngcono.
AGRS1SG- improved
*I am better.*

“Non-agreeing” adjectives appear with subject marking (on the null copula) in the 3rd person, “agreeing adjectives” do not:

(40) a. M- khulu umsebenzi.
AA3- big job3
*The job is big.*
b. I- ndlu i- mnyama.
AUG9- house9 AGRS9-black
*The house is black.*

In attributive positions the two classes of adjectives show the same systematic difference:

(41) a. i- khadi e- li- bomvu
AUG5 card REL- AGRS5-red
*a red card*
b. u- thisha o- mu- sha
AUG1 teacher REL- AA1- new
*the new teacher*

Strikingly, in other tenses agreeing adjectives can appear with both adjectival agreement and subject agreement:

(42) nga- unyaka ozayo a- zo- be e- ma- khulu kakhulu.
during-year next IND.AGRS6- FUT- COP PRT.AGRS6- AA6- big very
*Next year they will be much bigger.*

With inchoative interpretation, subject agreement is absent:

(43) a. i- kusasa li- zo- ba ngcono.
AUG- future5 AGRS5-FUT- COP improved
*The future will become better.*
b. u- zo- ba m- khulu.
AGRS3-FUT- COP AA3- big
*It (the job) will become big.*

Importantly, both classes of adjectives differ from nouns in that they do not combine with the copular particle *ngi*.

### 6.2. Xhosa adjectives

Xhosa, like Zulu, has two types of adjectives: “agreeing” (real) adjectives and “non-agreeing” (nominal) adjectives. Agreeing adjectives appear with an additional agreement marker in the 1st and 2nd persons:

(44) a. Ndi- m- khulu kodwa nina ni- ba- ncinane.
AGRS1SG-AA1- big but 2PL AGRS2PL-AA2- small
*I am big but you are small.*
b. Ndi- ntsundu.
AGRS1SG-brown
*I am brown.*

In the third person, agreeing adjectives appear with no subject agreement:
Some notes on non-verbal predication in Bantu

(45) a. i- nkosi ya- a- bantu in- kulu. Xhosa
   AUG9- king9 POSS9 AUG2- people2 AA9- big
   The king of the people is big.

   b. Eli nxeba li- buhlungu. this5 wound5 AGRS5- painful
   This wound is painful.

Xhosa pattern coincides with the Zulu one: in the third person of the present tense, depending on whether AP predicates are adjectival or nominal only one agreement marker is chosen.

In the future tense, both agreement markers are present on agreeing adjectives, only subject agreement appears on non-agreeing ones:

(46) a. U- za ku- ba e- m- hle. Xhosa
   AGRS1- FUT- KU- COP PRT.AGRS1- AA1- beautiful
   S/he will be beautiful.

   b. U- mthi u- be u- hlulaza.
   aug3 tree3 AGRS3- COP.RCTPST PRT.AGRS3- green
   The tree was green.

With inchoative interpretation, subject agreement is absent:

(47) U- za ku- ba m- hle. Xhosa
   AGRS1- FUT- KU- COP AA1- beautiful
   S/he will become beautiful.

To summarize, in Xhosa as in Zulu, in the present tense only one agreement marker is used. In other tenses the presence of the adjectival agreement marker depends on the type of the adjective (“agreeing” vs. “non-agreeing”) and the presence of the subject agreement marker depends on whether the adjectival small clause is stative (yes) or dynamic (no). This strongly suggests that subject agreement marking in fact appears on the null copula be used to create stative predication (see above).

The question remains why present tense is different.

6.3. Venda adjectives

Dixon 1982:4-5: Venda only has twenty agreeing adjectives and no non-agreeing ones:

(48) a. Mutukana ndi mu- vhuya. boy1 PRED AA1- good-natured
   The boy is good-natured.

   b. Vele u do vha e mu- lapfu linwe duvha.
   Vele AGRS1 FUT COP PRT.AGRS1 AA1- tall one day
   Vele will be tall one day.

It would seem that “subject agreement” appears both in the present tense and in other tenses, but in the present tense it is invariable.

6.4. Swahili adjectives

Swahili AP and NP predicates can appear in a variety of constructions:

(49) a. Shati ni ø- chafu. Swahili: particle ni
   shirt5 PRED AA5- dirty
   The shirt is dirty.
b. Nguo zi safi. subject agreement
clothes_{10} AGR_{S10} clean
The clothes are clean.

c. Yeye m- gonjwa. nothing
s/he AA_{1}- ill
S/he is ill.

Marshad and Suleiman 1991: in the past and future tenses $ni$ is replaced by the copular verb $wa$ taking the regular verbal subject agreement:

Ali AGR_{S1}-PST- INF- COP rich
Ali was rich.

b. Ali a- ta- ku- wa m- refu.
Ali AGR_{S1}-FUT- INF- COP AA_{1}- tall
Ali will be tall.

Once again we see a division of adjectives into “agreeing” and “non-agreeing” ones, though we do not have the data to determine whether Swahili agreeing adjectives behave like in Zulu and in Xhosa.

With negation and in dynamic primary predication (become) subject agreement is impossible:

(51) a. a- ka- wa m- refu.
AGRS_{1}-CONS- COP AA_{1}- tall
...and s/he became tall.

b. Mti si m- refu.
tree_{3} NEGPRED AA_{3}- tall
The tree is not tall.

It would seem that subject agreement without overt verbs is only possible in the present tense – $ni$ can be used in other tenses for further emphasis (Marshad and Suleiman 1991:36), suggesting that it might have a similar function in the present tense as well.


NB: It might be difficult to extend this analysis to Venda, Xhosa or Zulu because of multiple instances of subject agreement in copular clauses in tenses other than the present tense.

6.5. Two types of adjectives

The class of “agreeing” (or “real”) adjectives is closed in all four languages.

Non-agreeing adjectives seem more similar to verbs or PP predicates than to nouns, unlike in Japanese, where adjectives are subdivided into “verbal” and “nominal” (Kageyama 1982, Miyagawa 1987, Kubo 1992, Nishiyama 1999, etc.), of which only the latter appear with an overt copula:

(52) Canonical (“verbal”) adjectives

a. yama-ga takai.
mountain-NOM high.PRES
The mountain is high.

b. yama-ga takakatta.
mountain-NOM high.PAST
The mountain was high.
Some notes on non-verbal predication in Bantu

Nominal adjectives

a. yoru-ga sizuka-da.
night-NOM quiet-COP.PRES
The night is quiet.

b. yoru-ga sizuka-datta.
night-NOM quiet-COP.PAST
The night was quiet.

Unlike in Japanese, in Bantu languages non-agreeing adjectives do not behave like nouns in that they do not require a copular particle.

7. LOCATIVES AND PPS

In none of the four languages examined do locative and PP predicates appear with a copular particle, in any tense:

AGRS1SG- SEPTH- LOC- Mpumalanga/east
I am from Mpumalanga/from the east.

b. Ng- a- ba s- e- Thekwini.
AGRS1SG- REMPST- be SEPTH- LOC- Durban
I was in Durban.

AGRS1SG- with- AUG- dog
I am with the dog/ I have a dog.

b. Ngi- be na- u- mfana.
AGRS1SG- COP.RCTPST with- AUG- boy
I was with a boy/I had a boy.

NB: Certain pronominal locatives (e.g., there) and adverbials (e.g., outside) trigger subject agreement, behaving like NP predicates

a. U- s- emlanjeni.
AGRS1- SEPTH- LOC-river-LOC
S/he is in the river.

b. Intaka i- nga- ba s- e- mthi -NI lona.
bird9 AGRS9- POT- COP SEPTH- LOC- tree3-LOC this3
The bird may be in this tree.

a. Vhana vha tsikolo -ni.
children2 AGRS2 school -LOC
The children are at school.

b. Ri do vha ri mutangano -ni.
AGRS1PL FUT COP AGRS1PL meeting -LOC
We will be at the meeting tomorrow.

a. Vita vi- na mito.
chairs8 AGRS8-with pillows
The chairs have pillows.

b. Nguo zi- mo sanduku- ni.
clothes10 AGRS10- LQC suitcase- LOC
The clothes are in the suitcase.
In sum, all four languages behave the same in combining locatives with the copula directly.

**Puzzle:**

NB: The data and judgments are courtesy of a native speaker consulted by Jochen Zeller.

    AGRs2SG- FUT- COP SETH- LOC- Durban
    *You will be in Durban (until you have enough money to pay for a taxi to Umlazi).*

    b. U- zo- be u- s- e- Thekwini.
    AGRs2SG- FUT- COP PRT.AGRs2SG- SETH- LOC- Durban
    *You will be in Durban (by 10 o’clock).*

(60) a. Wa- ba s- e- Thekwini.
    AGRs2SG.REMPST- COP SETH- LOC- Durban
    *You were (stayed) in Durban (during that time).*

    b. Wa- be u- s- e- Thekwini.
    AGRs2SG.REMPST- COP PRT.AGRs2SG- SETH- LOC- Durban
    *You were in Durban (at a certain time).*

The *ba/be* distinction correlating with the presence of participial subject agreement “on the predicate” does not correspond to the difference between dynamic and stative predication.

Possible hypothesis: these are compound tenses. To be tested.

8. **APPENDIX: ABBREVIATIONS USED**

<table>
<thead>
<tr>
<th>1/2/3</th>
<th>first/second/third person</th>
<th>NEG</th>
<th>negation</th>
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<tr>
<td>AA</td>
<td>adjectival agreement marker</td>
<td>NEGPRED</td>
<td>negative copular particle</td>
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<td>NOM</td>
<td>nominative</td>
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<td>AGRs</td>
<td>subject agreement marker</td>
<td>NPX</td>
<td>noun prefix</td>
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<td>REMPST</td>
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<td>SG/PL</td>
<td>singular/plural</td>
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</tbody>
</table>

9. **REFERENCES**


Runner, Jeffrey T. 2006. Lingering challenges to the raising to object and object control constructions. Syntax 9, 193-213.


