

On the definition of adjectives in Dinka

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Hi everyone, I'll be talking about adjectives in the Dinka language, their inflectional morphology and classification, and the subsequent implications for the debate on what adjectives are cross-linguistically.

MAIN POINTS

- 1) The adjective class in Dinka is a subclass of intransitive verbs...
- 2) ...defined by two morphophonological characteristics:
 - Low-toned finite form
 - Overlong (VVV) attributive construct state (the form that appears when a postnominal modifier is followed by another modifier)

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So the main points of today's talk are to show that the adjective class in Dinka is a subclass of intransitive verbs defined by two morphophonological characteristics: a low-toned finite form and an overlong attributive construct state. I'll explain what these are in describing the morphology of adjectives in Dinka. In order to show that Dinka adjectives are indeed verbs, and that they differ *only* in these two morphophonological characteristics, I'll first describe a range of intransitive verb morphology, which has been relatively unexplored in comparison to the transitive verb morphology in Dinka. I'll show that adjectival and non-adjectival intransitive verbs clearly pattern together, and then that the adjectival ones distinguished by the fulfillment of these two conditions. It's important to highlight this, that the distinction is morphological, because syntactically, the adjective class behaves identically to non-adjectival intransitive verbs, and I'll discuss this, as well as some other similarities to non-adjectival intransitive verbs, that indicate that Dinka may challenge previous definitions of adjectives.

LANGUAGE BACKGROUND

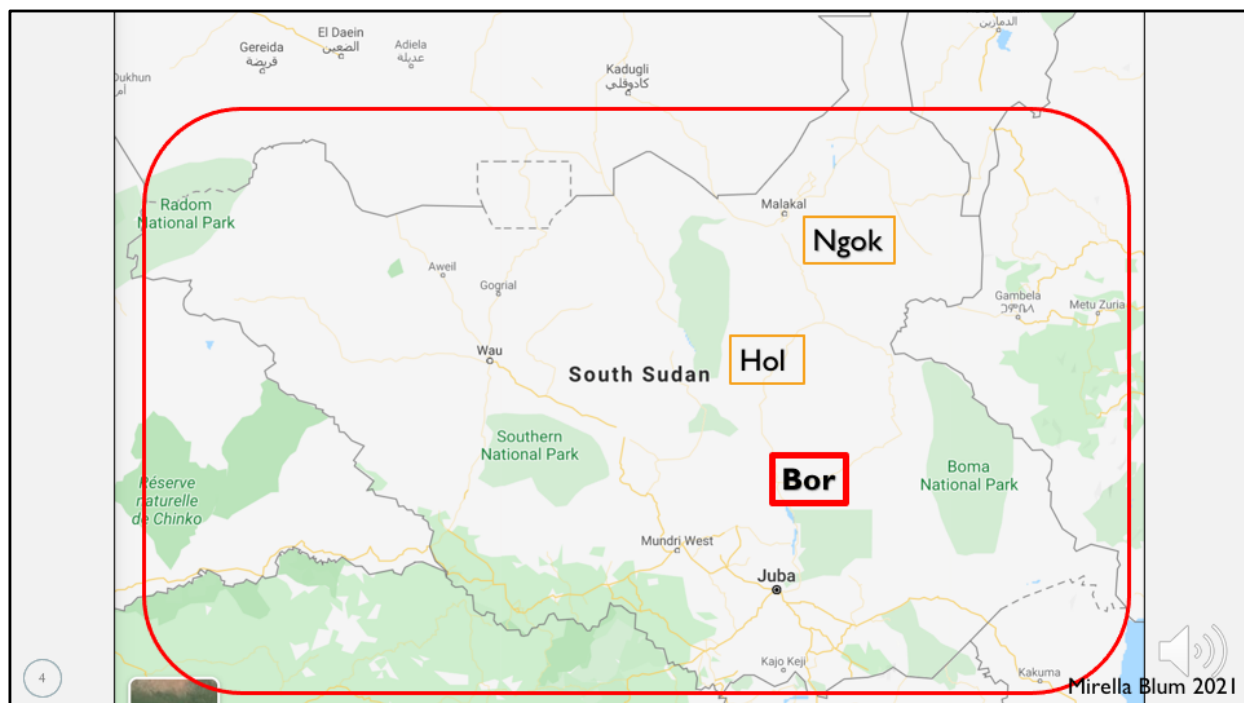
- West Nilotic language spoken in South Sudan
- Four dialect clusters: Rek, Agar, **Bor**, **Padang**



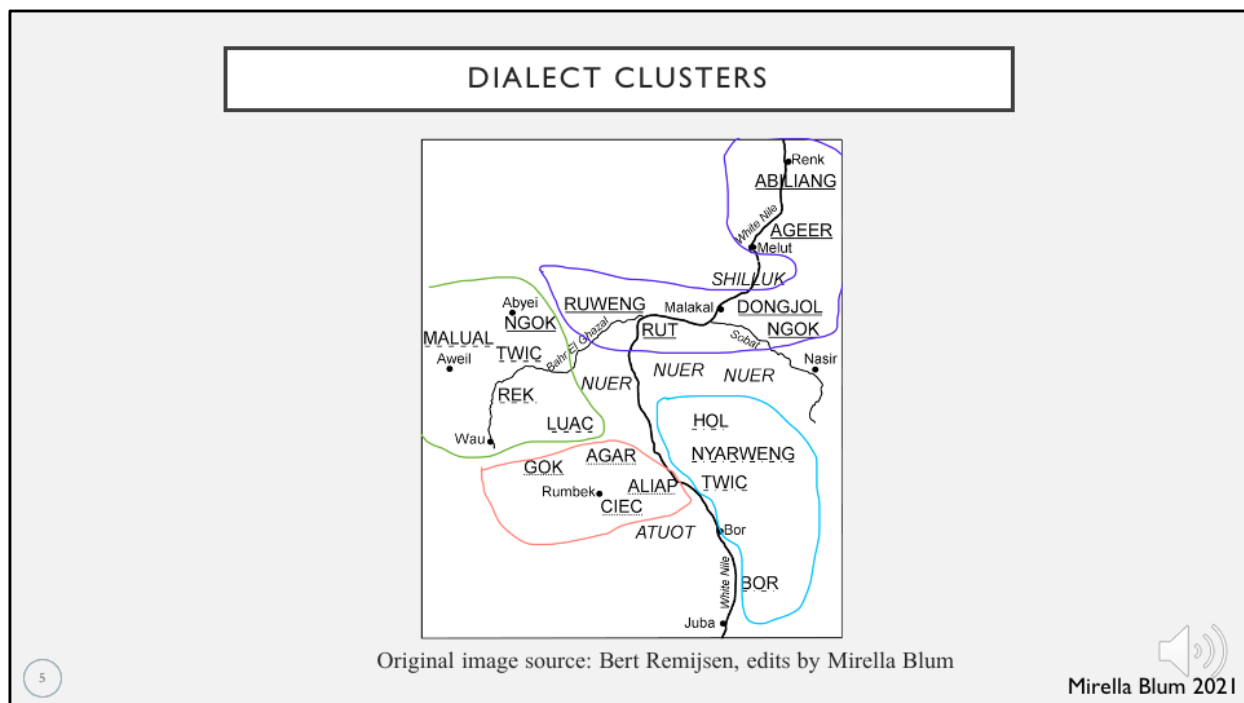
The map shows the geographical context of South Sudan, which is highlighted with a red rectangular border. It is situated in East Africa, bordered by Sudan to the north, Ethiopia to the west and south, and Kenya to the east. The Red Sea is to the northeast, and the Gulf of Aden is to the southeast. Other countries shown include Nigeria, Chad, Niger, Eritrea, Yemen, Saudi Arabia, and the United Arab Emirates. Major cities like Lagos, Kinshasa, Nairobi, and Dar es Salaam are also marked.

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So, first to provide a language background, Dinka is a West Nilotic language spoken in South Sudan, which is outlined by red here, and there are four dialect clusters: Rea, Agar, Bor, and Padang, and the data that I'll be speaking about today come from the Bor and the Padang clusters.



The data I'll be speaking about today come primarily from the Bor South dialect, which has a red border, but my characterizations of adjectives hold across other dialects of Dinka—the other two outlined here, Hol and Ngok, which suggests that this characterization will hold for the language in general.




To put this into the perspective of Dinka dialect clusters, we see that the Bor and Hol dialects are from opposite ends of the same dialect cluster, the Bor cluster, outlined in blue here, whereas the Ngok dialect is here, in the purple cluster, the Padang cluster, which is separated from the Bor cluster by Nuer territory—that's a closely related but separate language.

LANGUAGE BACKGROUND

	Labial		Dental		Alveolar		Palatal		Velar	
Plosive	p	b	ɸ	ɖ	t	d	c	ɟ	k	g
Nasal	m		ɱ		n		ɲ		ŋ	
Trill					r					
Lateral					l					
Approx.	w						j		ɥ	

- Vowels: /i, e, ε, a, ɔ, o, u/

- **Dinka is primarily monosyllabic (CVC);**
 - Syllable structure: C(j)(w)V(V)(V)C
 - function morphemes may be CV(V) or V


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To run through the segmental phonology of the language, there are 20 consonants in five places of articulation, and the language has no fricatives. There are seven vowels, and the language is primarily monosyllabic, with mostly closed syllables. The syllable structure, as you can see here, is an onset followed by an optional semivowel, and then a vowel of one of three lengths, which I'll come to in a moment, and then the coda. Function morphemes can and in fact, often are CV or V; content morphemes can be as well, but that's exceptional.

LANGUAGE BACKGROUND

- Binary voice quality (modal, breathy)
 - a) **ròoor** ‘forest’ b) **rḡoor** ‘men’
 - All vowels appear in both voice qualities. Exception: /u/ is invariably breathy
- Ternary vowel length
 - a) **màṅ** ‘slap\2SG’ b) **màaṅ** ‘slap\1SG’ c) **màaan** ‘hate\1SG’
 - /a/ and /ε/ merge in the shortest length grade
- Tone
 - a) **lḡaak** ‘saliva.UNC’ b) **lḡaak** ‘belt.SG’
 - c) **māan** ‘hate\PASS’ d) **māan** ‘hate\2SG’

Dinka dialects have 3–4 tones (Andersen 1987, Remijsen & Ladd 2008, Remijsen 2013)

Abbreviations: 1 = first person, 2 = second person, CS = construct state, DECL = declarative, PASS = passive, PRF = perfect, SG = singular, UNC = uncountable



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Dinka is known for its complex set of suprasegmental contrasts. So, there is a binary voice quality contrast between modal and breathy and I’ll play that now [EXAMPLES PLAYED], and 6 of the 7 vowels appear in both voice qualities, with the exception of /u/, which is always breathy. There is also a three way vowel length contrast between short, long, and overlong, which I’ll play examples of now, here’s a near minimal set [EXAMPLES PLAYED]. And once again 6/7 vowels exhibit this three-way contrast, with the exception of /a/ and /ε/, which merge in the shortest length. Lastly there is tone; Dinka dialects have 3 or 4 tones, depending on the dialect, each dialect with its own set of tonal phenomena, and I’ll play some examples. The first pair is between a Fall and a Low tone on an overlong vowel; the second pair is between a Fall and a High tone on a long vowel. All of the dialects I discuss today are four-toned. And it should be noted that all three of these suprasegmental contrasts—voice quality, vowel length, and tone—are both lexical and morphological.

INFLECTIONAL MORPHOLOGY OF INTRANSITIVE VERBS

Base forms: finite and non-finite

	Finite	Non-finite
'Good'	ràaan ǎ-pjàṭ person DECL.SG -good 'The person is good.'	ràaan ɛe pjàaṭ person DECL.SG.PST good\NF 'The person was good.'
'Pray'	ràaan ǎ-lǎaṅ person DECL.SG -pray 'The person is praying.'	ràaan ɛe lǎoṅ person DECL.SG.PST pray\NF 'The person was praying.'
'Tall'	ràaan ǎ-bǎaar person DECL.SG -tall 'The person is tall.'	ràaan ɛe bǎeer person DECL.SG.PST tall\NF 'The person was tall.'

Finite and non-finite forms can differ in vowel length, voice quality, tone, vowel quality, or a combination. They can also be identical.

Note: 'good' and 'tall' are adjectival and 'pray' is non-adjectival.

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I'll begin with base forms, in which the subject occupies the pre-verbal position. Intransitive verbs have a finite form and a non-finite form, as seen in the table here, and these forms are found in predicational phrases. The finite form is found in the present imperfective and past imperfective, and is morphologically unmarked. The non-finite form is found in phrases marked for other tenses, such as present perfect, past perfect, habitual, and future.

Finite and non-finite forms can differ in vowel length, voice quality, tone, vowel quality, or a combination of these. They can also be identical. It should be noted that 'good' and 'tall' are adjectival and 'pray' is non-adjectival. However, you can see that the shift from finite to non-finite involves length for 'good' and vowel quality for 'pray' and 'tall.' This is indicative of intransitive verbs in general. That is, I have found no regular patterns of exponence for the non-finite forms. There are adjectival intransitive verbs that have a vowel quality change and non-adjectival intransitive verbs that have a length change. And it should also be noted that the prefix a- here, the declarative prefix, is a prefix found on verbs in Dinka, including transitive verbs, so 'good' 'pray' and 'tall' all appear to be equally verbal. What's important here is these lexical items, can appear in these contexts, and all of them can appear in all of these contexts. Though I would like to point out that the finite forms of 'good' and 'tall' are

low-toned, where as the finite form of 'pray' is high-toned. That will come back later.

INFLECTIONAL MORPHOLOGY OF INTRANSITIVE VERBS

Inflections for person and number: Set A

- Preceded by *tɛ* (grammaticalized form of the word ‘place’) but which functions as a relativizer
- Only 2 phonological forms: 1SG is differentiated; all other forms are identical.
- Obligatory followed by a pronoun

- ex. *tɛ pjaat uɛɛn*
REL good\1SG PRO.1SG
‘When I am good’

	1SG	2SG	3SG	1PL	2PL	3PL
‘Good’	pjaat	pjat	pjat	pjat	pjat	pjat
‘Pray’	laan	leɛn	leɛn	leɛn	leɛn	leɛn
‘Tall’	baaar	bɛɛɛr	bɛɛɛr	bɛɛɛr	bɛɛɛr	bɛɛɛr

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Intransitive verbs, both adjectival and non-adjectival, inflect for person and number, and they actually do so in two different ways. This is the first set of inflections, which I call “set A,” and they appear when preceded by *te*, which is a relativizer. They also only have two phonological forms; one for first person singular, and one for second person singular third person singular, and first, second, and third person plural. And these inflections are obligatorily followed by a pronoun. You can see an example here; *tɛ pjaat uɛɛn*, which means ‘when I am good.’ And then the inflections for ‘good,’ ‘pray,’ and ‘tall’ are displayed in the table below. And you can see that for all of them, the first person singular forms are differentiated and the rest of the forms are syncretic.

INFLECTIONAL MORPHOLOGY OF INTRANSITIVE VERBS

Inflections for person and number: Set B

- Found directly following clause-initial conjunction ‘kù’
- Utterance-final

- ex. kù pjàat
CONJ good\1SG
‘And I am good.’

	1SG	2SG	3SG	1PL	2PL	3PL
‘Good’	pjàat	pjàat-ě	pjèet	pjèet-kù	pjàat-kà	pjèet-kì
‘Pray’	l̩aŋ	l̩aŋ-ě	l̩eŋ	l̩eŋ-kù	l̩aŋ-kà	l̩eŋ-kì
‘Tall’	b̩aaar	b̩aaar-ě	b̩eɛr	b̩eɛr-kù	b̩aaar-kà	b̩eɛr-kì

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Moving onto the set B inflections; these are found directly following the clause-initial conjunction *kù*, as we see in the example here with *kù pjàat*, ‘and I am good.’ It also seems to be the case that these inflections occur utterance-finally, though it’s unclear whether this is for syntactic or prosodic reasons. As you can see, all three of the verbs display almost identical alternations, both in vowel quality and in tone. It should also be noted that the suffixes seen on the plural inflections are also found in the corresponding plural inflections in transitive verbs, which is further evidence that all of these items are verbal. And at this point, I hope it’s clear that words like ‘good,’ ‘pray’ and ‘tall’ all pattern together, and furthermore that they behave like verbs.

INFLECTIONAL MORPHOLOGY OF INTRANSITIVE VERBS

Postnominal modification:

- In Dinka, modifiers follow the noun
- Not diagnostic of word class

a. mwón ak̄im
man.CS doctor.SG
'man who is a doctor'

b. mwón pjät
man.CS good
'good man'

c. mwón l̄aṅ
man.CS pray
'praying man'

d. mwón màan raaan
man.CS hate person.SG
'man who hates the person'

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Now, in Dinka, nouns are modified postnominally. And this postnominal modification slot can be occupied by a wide range of items. That is, the postnominal position is not at all indicative of word class. So in example a we have a noun postnominally, in example b we have an adjectival intransitive verb, in example c we have a non-adjectival intransitive verb, and in example d we have a transitive verb and the object of a transitive verb. And all of these prompt the same inflection on the head noun, that is, the construct state, which is the form a noun takes when modified postnominally. There is essentially no difference. And I'll come back to that in a bit as something that's typologically interesting about Dinka adjectives, but what's important to understand right now is that occurring post-nominally is not itself diagnostic of lexical category. However, postnominal modifiers do play a key role in defining adjectives in Dinka.

INFLECTIONAL MORPHOLOGY OF INTRANSITIVE VERBS

Attributive construct state (ACS):

- Differs between adjectival and non-adjectival verbs
- Adjectival intransitive verbs lengthen when they occur **following a noun and followed by another modifier**. Non-adjectival intransitive verbs do not.

a. mwón **láj** pjàt
man.CS pray good
'praying good man'

b. mwón **pjèeet** láaj
man.CS good\ACS pray
'good praying man'

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And that's because of one key difference. Adjectival intransitive verbs have what I call an 'attributive construct state,' and non-adjectival intransitive verbs don't. This form appears when a postnominal modifier is followed by another postnominal modifier. So we see in example a that when 'pray' is followed by 'good,' it remains in its unmarked form, whereas when 'good' is followed by 'pray,' it lengthens and, actually, the vowel quality changes. But what's key here is the lengthening; that's what defines the attributive construct state.

WHAT DEFINES ADJECTIVAL INTRANSITIVE VERBS?

Condition 1: The **tone of the finite form** of an adjectival intransitive verb is low.

ràaan ǎ- pjàt 'The person is good.'	✓
ràaan ǎ- lǎan 'The person is praying.'	✗

Condition 2: The **attributive construct state** form of an adjectival intransitive verb has an overlong vowel.

mwón pjèet lǎan 'good praying man'	✓
mwón lǎan pjàt 'praying good man'	✗

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So, adjectival intransitive verbs are defined by two conditions, and both of these conditions must be fulfilled. The first condition is that the tone of the finite form must be low. So, for example, 'good' fulfills condition 1, and 'pray' does not. Now, it should be noted that there are some non-adjectival intransitive verbs that fulfill condition 1, but they don't fulfill condition 2, which is that the form of the verb when in the postnominal position and followed by another modifier, must be overlong. So we see that 'good' fulfills condition 2 and 'pray' does not.

COMPARATIVE, SUPERLATIVE, INTENSIFICATION

Dinka has **no superlative**.

Comparative expressed via external argument:

t̩ik ǎ-b̩a̩ar ǣ m̩òc
woman DECL.SG-tall PREP man
'The woman is taller than the man.'

Intensification is expressed with *ar̩ɛet*.

a. r̩a̩an ǎ-p̩j̩at̩ ar̩ɛet b. r̩a̩an ǎ-d̩aal ar̩ɛet
person DECL.SG-good INTENS person DECL.SG-laugh INTENS
'The person is very good.' 'The person is laughing loudly.'

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Now, to shift the discussion more towards adjectives in Dinka and how they relate to the definition of adjectives cross-linguistically, I return to briefly to Dinka morphology. Dinka has no superlative, and comparison is expressed using a preposition that introduces an external argument. Intensification, on the other hand, is expressed via the word *ar̩ɛet*, which follows the verb, and which applies to both adjectival and non-adjectival verbs as you can see here. And this is interesting, because though comparison isn't universally something associated with the adjective class, it is quite common, and the fact that there is not a construction only used for comparatives or superlatives is notable.

'ADJECTIVE' VS. 'STATIVE' VS. 'PROPERTY'

- **Adjectival** verbs, not stative verbs:
 raaan ǎ-réer
 person DECL.SG-sit
 'The person is sitting.'
- Dinka adjectives are evidence that 'property' is not a predictor of adjectivehood:

Gloss	Finite form	ACS	Classification
'angry with somebody'	uḡòok	uḡòook	Adjectival
'proud (positive)'	njàam	njàam	Non-adjectival
'break (unaccusative)'	ḡòoḡ	ḡwòòḡ	Adjectival

- And there are 'properties' in other word classes, e.g. 'blue' is nominal and behaves identically to 'woman':

<p>a. kḡuur ée mà-làak stone DECL.SG.COP M-blue.SG 'The stone is blue.'</p> <p>c. mà-làak ǎ-pjàḡ M-blue.SG DECL.SG-good 'The blue is pretty.'</p>	<p>b. raaan ée tiik person DECL.SG.COP woman 'The person is a woman.'</p> <p>d. tiik ǎ-pjàḡ woman DECL.SG-good 'The woman is good.'</p>
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And now I'd like to talk about why I'm calling these adjectives, and what the Dinka adjectives contribute to the larger discussion of what adjectives are. It's important to note that I think these should be called adjectival verbs, as opposed to stative verbs, because there are non-adjectival intransitive verbs with stative meanings, such as 'sit,' which you can see here. The finite form is high-toned, and therefore it's not adjectival.


Now, 'stative' refers to the meaning, to the semantics, and my choice of 'adjective' is related to the semantic types of the words in the subclass as well. Of course, it's important to note that the classification itself is entirely morphophonological, and not based on semantics at all. And this actually brings up two issues that are kind of in conflict:

The first is that Dinka adjectives are evidence that 'property' is not a good predictor of adjectivehood. So we see here that the finite form of all three of these intransitive verbs is low-toned, so they all fulfill condition 1, but only two of them fulfill condition 2. And 'proud' which is a property, a human state of being, is non-adjectival, because its attributive construct state is not overlong, whereas 'break' must be classified as adjectival because its ACS is overlong. Now, 'break' is certainly an exception—most of

the adjectival intransitive verbs are properties—but it shows that a property is not necessarily an adjective in Dinka, and that an adjective is not necessarily a property. There are also properties in other lexical categories, but they are morphologically and syntactically identical to other items in those categories, so I don't consider them a separate adjective class. Now, on the other hands, despite the fact that property can't be definitively linked to adjective, there clearly *is* a connection. You know, almost all of the intransitive verbs in Dinka with these two morphophonological characteristics are properties, and they *are* indeed lexical items that, cross-linguistically, are often classified as canonical adjectives: big/small, black/white/red, good/bad, etc.

NOT UNIQUE IN MODIFICATION ABILITY

a. mwón akɿim man.CS doctor.SG 'man who is a doctor'	b. mwón pjàt man.CS good 'good man'
c. mwón lɿaŋ man.CS pray 'praying man'	d. mwón màan ràaan man.CS hate person.SG 'man who hates the person'

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My last discussion point is that adjectives have been proposed to be defined by a unique ability to directly modify nouns. Adjectives in Dinka do this, but so do, it seems, at least most other lexical categories, as seen in these examples, which were presented before.

DISCUSSION

- Defining adjectives: abstract notion or language-specific (e.g. Dixon 2004)?
- Dinka adjectives:
 - not defined by an exceptional role in adnominal modification
 - behave identically syntactically to other intransitive verbs
 - do not have a degree system
 - cannot be reliably predicted by semantic types

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And I think this speaks to a larger issue in lexical categorization, which is approaching it either via a preconceived notion of what, for example, Adjective must mean, or approaching it with a more language-specific approach, in which subtle differences might mean be the distinguishing factor between lexical categories. You know, I argue that the subclass of intransitive verbs presented here is the adjective class of Dinka. And it's clear that they're morphologically distinct. But if one believes 'adjective' must require inflection for comparison, for example, or must be the only lexical class that can directly modify nouns—then the Dinka adjectives either aren't adjectives or pose significant problems for defining what an adjective is. And it's true that the Dinka adjectives do not exhibit several of the features that have been suggested as defining characteristics of 'adjective': in Dinka, they are not defined by an exceptional role in adnominal modification; they behave identically syntactically to other intransitive verbs; they do not have a degree system; and they cannot be reliably predicted by semantic types. So they do directly pose a question for typologies that require specific characteristics.

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So, that's my talk, I'd like to thank first and foremost my Dinka teachers including Jon Pen de Ngong, Samuel Galuak Marial, Sammy Akuoch Bol, and Teresa Achok Joseph, as well as my supervisors Bert and Bob, and Tatiana as well for feedback on this project, and you—thanks so much for your time today.