## Fiat Lingua

Title: Grambank \& Language Documentation: Zhwadi and Its Features

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# Grambank \& Language Documentation: Zhwadi and Its Features ${ }^{1}$ 

Jessie Sams (soon to be Peterson)

Grambank, an online database cataloging 195 linguistic features for over 2,000 languages, was released earlier this year. At first, I approached it the same way I approached other linguistic resources (e.g. WALS Online, World Lexicon of Grammaticalization): as a tool for understanding distribution of linguistic features, correlations among features, and ways languages use those features. And Grambank is indeed an excellent resource to add to a conlanger's "toolbox" because it isolates key linguistic features of languages, provides descriptions with examples, and presents the features as yes/no questions for the most part (only a handful diverge from that pattern).

There is a great deal of overlap between WALS Online and Grambank: the Max Planck Institute for Evolutionary Anthropology supports both publications, and many scholars contributed to both resources. Both strive to show feature distribution of language features-not just to show how many languages have a particular feature but also to show where those languages are spoken.

WALS Online breaks features into chapters, where each feature is described with examples before a quantitative breakdown and associated map are provided (you need to click on "Go to map" to see it). Each chapter ends with a summary of findings to indicate whether the feature appears to be geographically situated and what other findings are related to that particular feature. A sampling of chapter titles includes:

> Chapter 65: Perfective/Imperfective Aspect
> Chapter 66: The Past Tense
> Chapter 67: The Future Tense
> Chapter 68: The Perfect

There are 152 chapters in total that cover areas of phonology, morphosyntax, and semantics.

Grambank focuses on morphosyntax and provides the distribution of features without closing commentary. The goal is not to say whether there are patterns within the distribution of features but to simply show what features occur based on published

[^0]linguistic descriptions of languages. These are the features that directly overlap with the sampling of WALS chapters:

GB082: Is there overt morphological marking of present tense on verbs?
GB083: Is there overt morphological marking on the verb dedicated to past tense?
GB084: Is there overt morphological marking on the verb dedicated to future tense?
GB086: Is a morphological distinction between perfective and imperfective aspect available on verbs?

Languages are coded as either having the feature (an answer of "yes" is coded as 1), not having the feature (an answer of "no" is coded as 0), or "not known" (coded as ?). The "not known" response indicates that no published grammars specifically mention the feature or have examples that demonstrate the feature (whether or not the feature was in focus).

The number of languages surveyed is much greater in Grambank. Looking specifically at the feature isolating the future tense in languages, WALS Online includes 222 languages in the sampling while Grambank includes 2,402 entries (with only 129 marked as "not known").

Below is the map shown on WALS Online for the future tense:


[^1]Underneath the map is the list of languages in the sampling with a reference list to indicate where the information came from for that language (very helpful if you want to find out more about the language!).

Here is the map for the same feature on Grambank:


Image 2. Grambank map for future tense
Like in WALS, there is a list of languages underneath the map that includes the language names and sources. However, an added bonus is the "comment" section, where some contributors provide more specific information, including examples of the feature in the language. The comment section is what specifically inspired me for the project that is really the focus of this article.

First, though, I'm going to present a minor tangent to highlight another feature of Grambank: you can have the map show you a cross-section of two features to identify possible correlations. For instance, combining the future tense with the past tense provides this new feature-dependency map:


Image 3. Grambank dependency map for future and past tenses

The dots are coded to show all possible combinations of the two features, and this shows that it is common for languages to not mark either tense (the $0 / 0$ results) or to mark both tenses (the $1 / 1$ results), and that it is more common for languages to mark the past tense but not the future (the $1 / 0$ results) than it is for languages to mark the future but not the past (the $0 / 1$ results).

At the same time I was exploring more of Grambank, I was working on an outline for two different podcast episodes for LangTime Studio: one for a trivia game where I quizzed LangTime Studio co-host David Peterson on features of languages based on information in Grambank, and a second where David and I discussed methods of language documentation-specifically the features conlangers can and should include in their written grammars to make the information more accessible and user-friendly. As I was writing out notes for both episodes, I realized just how valuable that comment section was underneath the maps. I further saw how marking the features as either being present or absent made comparing languages and understanding how they work a little easier.

That led me to the idea of actually using Grambank's feature list as a method for language documentation. Because the list provides a consistent set of features, comparing information across languages is much easier. For conlangers sharing work with other conlangers, that means finding a key piece of information is easier because you can go directly to that feature listing. Furthermore, having a set list of features means conlangers who struggle to provide write-ups of their conlangs don't have to fret about ways to present the information-they can just focus on answering the questions. (Mind you, for those of us who enjoy writing up full descriptions of our languages, this method is not meant to replace those written grammars. Instead, it is meant to supplement it, especially as a shareable document for others to more quickly identify the features that occur in the language and how they work.)

To that end, I created a shareable Google Sheet with six columns. The first column is a link directly to the related Grambank feature description (which is especially important for understanding what the feature targets). The second column is the feature question, copied directly from Grambank (i.e. I have not changed or modified any of the wording used).

The third and fourth columns are organizational features that I added because I noticed that the features list is not necessarily in an order that would be helpful for identifying groups of information, such as finding all the features relevant for articles and their use in the language. I categorized each feature as belonging to one of three major categories found cross-linguistically: noun, verb, or clause. And then I further categorized each feature as belonging to a more specific subcategory of information, with 20 subcategories represented, such as article, negation, or relative clause. For example, there are eight features that focus on articles and their use in the language, and each of those features are, in turn, categorized in the noun category since they are relevant to nouns. These columns allow you to sort the sheet to, for example, show all the article features together (they appear in multiple places in the original order of the Grambank list).

The fifth column provides dropdown menus for answering the question. Again, most features are yes/no questions, so the dropdown menus provide three options: yes, no, and not sure. The "not sure" response indicates it is a feature you haven't yet figured out for your language. Finally, the last column is perhaps the most important. It provides a space for you to describe the feature and provide examples of how it works in your language. That's the information other conlangers really want to see: they want to know how you implemented a particular feature (or the strategy you chose in its absence).

Another feature of the sheet is that I added a second page with instructions for using the sheet. To access the instructions, look at the tabs across the bottom of the screen and click on "Instructions." The sheet is a view-only document, so you will need to copy or download it to use for yourself. When you do, you can make all sorts of customizations to it, including changing the colors, fonts, category and subcategory labels, and column sizes.

As an example, I have started a document for my conlang Zhwadi. It is a work in progress, and there are many features coded as "not sure" for the time being since I haven't quite sussed those out yet. But it provides an example of how you can use the sheet to document your own language. (Or to document a natlang or begin a new conlang!)

The final half of this article is a PDF of Zhwadi's feature list as it currently stands. ${ }^{2}$ As I enter more information and make more decisions about the language, I will continue updating this article (hence, the note on its current version at the bottom of the first page).

In the meantime, happy documenting!

[^2]| Grambank Feature |  | Basic Category | Subcategory | Y/N | Conlang Description and Example(s) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| GB020 | Are there definite or specific articles? | Noun | Article | No | Zhwadi lacks definite and indefinite articles, so sentence like Pela liriyám abazil can be translated with indefinite articles, definite articles, or a mix of both: "The/A person collected (the) wildflowers." |
| GB021 | Do indefinite nominals commonly have indefinite articles? | Noun | Article | No | See example in Feature 020. |
| GB022 | Are there prenominal articles? | Noun | Article | Yes | The demonstrative determiner attaches as a prefixed clitic to the noun (or to a modifier preceding the noun). <br> - gyav-ani "that sky" <br> - gyav-ara ani "that dark sky" <br> See Feature 025 for more examples. |
| GB023 | Are there postnominal articles? | Noun | Article | No | The only articles in Zhwadi are demonstrative determiners, and they precede the noun. |
| GB024 | What is the order of numeral and noun in the NP? | Noun | Numeral | Not sure | It will probably be Num-Noun. |
| GB025 | What is the order of adnominal demonstrative and noun? | Noun | Demonstrative | Dem-N | The demonstrative determiners attach as a prefixed clitic, and their forms depend on the initial sound of the word they attach to. Each demonstrative determiner has a vowel-final form (used when occurring with a stem beginning with a consonant) and consonant-final form (used when occurring with a stem beginning with a vowel). <br> - ko-dunī "this moss" / kol-anjé "this bee" <br> - gya-zhelu "that (visible) ivy" / gyav-obi "that (visible) mud" <br> - akla-yazhï "that (non-visible) lightning" / aklav-itu "that (non-visible) mouse" |
| GB026 | Can adnominal property words occur disontinuously? | Noun | Property Word | No | Modifiers typically precede their noun, but they can also appear directly after the noun in an inflected form that indicates the class of the noun being modified. <br> - gwava ipa ~ ipa igwava "smooth ice" <br> - rakye sarā ~ sarā tarakye "rough leaf" <br> Nominal modifiers can only occur before their nouns: <br> chāra sarā "green leaf" <br> uki chal "light hair" (or "white hair") <br> Regardless of whether they appear before or after the noun, they cannot appear discontinuously. |
| GB027 | Are nominal conjunction and comitative expressed by different elements? | Noun | Case/Flag | Not sure | I think I want to have different strategies for these, especially when more than two nouns are being joined. |
| GB028 | Is there a distinction between inclusive and exclusive? | Noun | Pronoun | Yes | Inclusive "we" is loa (or lo(w)- in its dependent form), and exclusive "we" is wa (or w(a)- in its dependent form). |


| 3rd |  |  |  |
| :--- | :--- | :--- | :--- |
|  |  |  |  |
| Noun | Pronoun | Yes |  |

Zhwadi has eleven noun classes, and each noun class has a distinct third-person pronoun form, presented here in singular and plural forms:

- animate class a ~ vya
- dirt class me ~ mevo
- stone class ka $\sim$ kavo
- grass class ta ~ taku
down class lu ~ luvo
- water class she $\sim$ shi
- ice class i ~ ipi
- fire class zu ~ zwi
- sky class ni ~nī
day class ro ~ roi/rozhe
night class je ~ jei/jezhe
Zhwadi does not have any dual forms for either pronouns or nouns.

Zhwadi demonstratives demonstrate a three-way distinction based on distance and visibility. The form of the demonstrative shifts if it is an adnominal modifier or an independent pronoun. Below, both forms are provided. The modifier form is a clitic that attaches either directly to the head noun or to a prenominal modifier. (See Feature 022 for more examples.)
proximal (to speaker and/or addressee): ko(l)- / ekó

- distal and visible (to speaker and/or addressee): gya(v)- / ogyá
- distal and not visible (to any participants in the conversation): akla(v)/vaklá
There are no elevation distinctions in demonstratives.
See Feature 035 for more information.

Demonstratives do not feature any differences based on the semantic properties of the head noun
Singular nouns are unmarked, and there are five different plural suffixes, which are not dependent on any phonological features of the stem. Which plural suffix is used with a noun is partially semantically determined, though some nouns are less predictable in which suffix they co-occur with:

- -(y)á typically only occurs with animate nouns (more specifically, animate nouns capable of volitionally forming groups) (e.g. "sisters") (v)ó is often used nouns that are found in mounds or can be put into mounds (e.g. "acorns")
$\boldsymbol{k} \bar{u}$ is the most common and generic plural suffix, occurring with many nouns
- ī occurs with nouns that tend to grow to fill a space rather than having individual referents (e.g. "water", as in a great deal of water)
-zhé typically only occurs with temporal nouns or events (e.g. "days")
So far, there are no nouns that are suppletive for number.

| Grambank Feature |  | Basic Category | Subcategory | Y/N | Conlang Description and Example(s) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| GB042 | Is there productive overt morphological singular marking on nouns? | Noun | Number | No | The singular forms of nouns are unmarked. |
| GB043 | Is there productive morphological dual marking on nouns? | Noun | Number | No | Zwhadi does not have a dual marker for nouns. |
| GB044 | Is there productive morphological plural marking on nouns? | Noun | Number | Yes | See Feature 039 for more information. |
| GB046 | Is there an associative plural marker for nouns? | Noun | Number | Not sure | This is a cool feature, but I'm not sure it will fit as a marker on the noun in my current vision of the noun system as a whole. |
| GB047 | Is there a productive morphological pattern for deriving an action/state noun from a verb? | Noun | Formation | Not sure | Having noun classes means I can turn any verb into a noun in some shape or form. I haven't yet decided if one class marker will be used as the basic (i.e. most generic) derivation. |
| GB048 | Is there a productive morphological pattern for deriving an agent noun from a verb? | Noun | Formation | Yes | The animate noun class marker $a(v)$ - can be used to create an agent noun from a verb, though its meaning is dependent on the verb in question (e.g. it will not always be a generic agent interpretation but may have a specific meaning). For instance: <br> - generic agent interpretation: $\boldsymbol{k e}$ "to paint" > aké "painter, artist" <br> - specific interpretation: onī "to howl" > avonī "coyote" |
| GB049 | Is there a productive morphological pattern for deriving an object noun from a verb? | Noun | Formation | Not sure |  |
| GB051 | Is there a gender/noun class system where sex is a factor in class assignment? | Noun | Class | No | See Feature 053 for more information. |
| GB052 | Is there a gender/nounclass system where shape is a factor in class assignment? | Noun | Class | No | See Feature 053 for more information. |
| GB053 | Is there a gender/noun class system where animacy is a factor in class assignment? | Noun | Class | Yes | One of the noun classes in Zhwadi is the animate class, so animacy is a factor. Inanimate nouns, though, are further classified into 10 different classes based primarily on texture and touch features. For instance, the grass class of nouns includes nouns that are solid but malleable-they can bend without breaking. The root eza means "body" and is an animate noun. Built off that root are the nouns kreza "trunk (of a tree)" (stone class) and cheza "stalk (of a plant)" (grass class). <br> The classes can also refer to locations (both spatially and temporally) where the noun is typically found. For instance, aké is "bird" (animate class), and its derivatives include shaké "duck" (water class), raké "hummingbird" (day class), and dimaké "owl" (night class). <br> These classes are more easily applied to concrete nouns, and abstract nouns occur in classes that are metaphorically attached to those qualities. The root zhwa means "soul, heart (in a metaphorical sense)" and belongs to the animate class. Built off that root are the nouns zuzhwá "love" (fire class), anzhwá "joy, joyfulness" (sky class), and rozhwa "happiness" (day class). |
| GB054 | Is there a gender/noun class system where plant status is a factor in class assignment? | Noun | Class | No | See Feature 053 for more information. |
| GB057 | Are there numeral classifiers? | Noun | Numeral | Not sure | I'm more likely to incorporate this if I choose a N-Num order (it would end up reflecting postnominal modifiers in that respect). Otherwise, I probably won't include this feature. |
| GB058 | Are there possessive classifiers? | Noun | Possession | No | See Feature 059 for more information. |


| GB059 | Is the adnominal possessive construction different for alienable and inalienable nouns? | Noun | Possession | Yes | Zhwadi distinguishes between alienable and inalienable possessions. Inalienable possession is marked by placing the possessor before the possessed noun without marking the possessor noun for the genitive case (it is treated as a modifier). Alienable possession is marked with the genitive case. <br> - Inalienable possession: pela un "a person's nose" <br> - Alienable possession: pelto lugĩ "a person's bag" |
| :---: | :---: | :---: | :---: | :---: | :---: |
| GB065 | What is the pragmatically unmarked order of adnominal possessor noun and possessed noun? | Noun | Possession | PossessorPossessed | Whether it's inalienable or alienable possession, the order of constituents is the possessor followed by the possessed. See Feature 059 for more information. |
| GB068 | Do core adjectives (defined semantically as property concepts such as value, shape, age, dimension) act like verbs in predicative position? | Clause | Core Adjective | No | Zhwadi has a class of core adjectives that are a class of their own, such as pirka "tall" and tanchi "short." In predicative positions, they appear unmarked before the verb. <br> - Swo pirka tozhá. "The tree is tall." <br> - Swo pirka tagī. "The tree appears to be tall." |
| GB069 | Do core adjectives (defined semantically as property concepts such as value, shape, age, dimension) used attributively require the same morphological treatment as verbs? | Clause | Core Adjective | Yes | When attributive adjectives appear before the noun they modify, they are unmarked and so are not treated in the same way verbs are. However, when they follow the noun they modify, they take the same prefix that marks a subject index on verbs to agree with the noun being modified: <br> - pirka swo "tall tree" <br> - swo tabirka "tall tree" |
| GB070 | Are there morphological cases for non-pronominal core arguments (i.e. S/A/P)? | Noun | Case/Flag | Yes | Case suffixes are a later development in Zhwadi (coming from postpositions that eventually reduced and attached to the noun), so they are much more regular than other inflectional markings and are applied to both nouns and pronouns. There are five cases in Zhwadi, which is a nominative-accusative aligned language: <br> - nominative (unmarked form) <br> - accusative -(a)m <br> - genitive -to <br> - dative/locative -za/-ez <br> - instrumental -jo <br> NB: The dative and locative cases came from two different postpositions that, when reduced, were phonologically so similar that they merged. |
| GB071 | Are there morphological cases for pronominal core arguments (i.e. S/A/P)? | Noun | Case/Flag | Yes | See Feature 070 for more information. |
| GB072 | Are there morphological cases for oblique nonpronominal NPs (i.e. not S/A/P)? | Noun | Case/Flag | Yes | See Feature 070 for more information. |
| GB073 | Are there morphological cases for independent oblique personal pronominal arguments (i.e. not S/A/P)? | Noun | Case/Flag | Yes | See Feature 070 for more information. |
| GB074 | Are there prepositions? | Clause | Order | No | See Feature 074 for more information. |


| GB075 | Are there postpositions? | Clause | Order | Yes | Zhwadi is a postpositional language, and the nouns co-occurring with postpositions typically occur in either the accusative or dative/locative case. When used with a pronoun, the form is further reduced so the pronoun appears as a prefix on the postposition without any case marking. <br> - jemam mas "during the night" <br> - jemas "during it (night class)" <br> - avazhyám le "with butterflies" <br> - vyale "with them (animate class)" |
| :---: | :---: | :---: | :---: | :---: | :---: |
| GB079 | Do verbs have prefixes/proclitics, other than those that only mark A, S or P (do include portmanteau: A \& S + TAM)? | Verb | TAM | No | Prefixes on verbs only mark A (subject). |
| GB080 | Do verbs have suffixes/enclitics, other than those that only mark A, S or P (do include portmanteau: A \& S + TAM)? | Verb | TAM | Yes | Suffixes on verbs include the infinitive marker -(i)I, future tense -ún, and negator -za. |
| GB081 | Is there productive infixation in verbs? | Verb | TAM | No | Zhwadi does not feature any infixation. |
| GB082 | Is there overt morphological marking of present tense on verbs? | V/arb | TAM | No | See Feature 084 for more information. |
| GB083 | Is there overt morphological marking on the verb dedicated to past tense? | Verb | TAM | No | See Feature 084 for more information. |
| GB084 | Is there overt morphological marking on the verb dedicated to future tense? | Verb | TAM | Yes | Zhwadi's verbs have a future-nonfuture distinction in tense marking. Unmarked forms of the verb are used for both present and past tenses while future forms are marked with the suffix -ún (the vowel sometimes appears in different forms, depending on the phonological form of the stem): <br> - fir "harvest/harvested" ~ firún "will harvest" <br> - tizhó "swing/swinged" ~ tizhón "will swing" <br> - zavi "leap/leapt" ~ zavyún "will leap" <br> - pyaka "jump/jumped" ~ pyakón "will jump" |
| GB086 | Is a morphological distinction between perfective and imperfective aspect available on verbs? | Verb | TAM | No | Zhwadi has a perfective auxiliary. See Feature 120 for more information. |
| GB089 | Can the $S$ argument be indexed by a suffix/enclitic on the verb in the simple main clause? | Verb | Index | No | See Feature 090 for more information. |
| GB090 | Can the $S$ argument be indexed by a prefix/proclitic on the verb in the simple main clause? | Verb | Index | Yes | Zhwadi verbs take an indexing prefix to agree with the S/A argument. As a nominative-accusative language, it does not distinguish between the $S$ and $A$ arguments. The prefixes indicate the class of the S/A argument. For instance, "it grew" might occur as meyuni (dirt class), kuyuni (stone class), or royuni (day class). |
| GB091 | Can the A argument be indexed by a suffix/enclitic on the verb in the simple main clause? | Verb | Index | No | See Feature 090 for more information. |
| GB092 | Can the A argument be indexed by a prefix/proclitic on the verb in the simple main clause? | Verb | Index | Yes | Zhwadi has a series of indexing prefixes to agree with the S/A argument. See Feature 090 for more information. |
| GB093 | Can the P argument be indexed by a suffix/enclitic on the verb in the simple main clause? | Verb | Index | No | See Feature 090 for more information. |
| GB094 | Can the P argument be indexed by a prefix/proclitic on the verb in the simple main clause? | Verb | Index | No | See Feature 090 for more information. |


| Grambank Feature |  | Basic Category | Subcategory | Y/N | Conlang Description and Example(s) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| GB095 | Are variations in marking strategies of core participants based on TAM distinctions? | Noun | Case/Flag | No | Core participants are marked with the same case suffixes (where applicable) regardless of TAM distinctions. |
| GB096 | Are variations in marking strategies of core participants based on verb classes? | Noun | Case/Flag | No | Core participants are marked with the same case suffixes (where applicable) regardless of verb type. |
| GB098 | Are variations in marking strategies of core participants based on person distinctions? | Noun | Case/Flag | No | While Zhwadi has pronominal forms to indicate person (with first-, second-, and third-person distinctions), the suffixes indicating case do not alter according to person. Those markers are the same. |
| GB099 | Can verb stems alter according to the person of a core participant? | Verb | Index | Not sure |  |
| GB103 | Is there a benefactive applicative marker on the verb (including indexing)? | Verb | Index | Not sure |  |
| GB104 | Is there an instrumental applicative marker on the verb (including indexing)? | Verb | Index | Not sure |  |
| GB105 | Can the recipient in a ditransitive construction be marked like the monotransitive patient? | Clause | Construction | Not sure |  |
| GB107 | Can standard negation be marked by an affix, clitic or modification of the verb? | Verb | Negation | Yes | Verbal negation appears as the suffix -za on the verb (or the auxiliary verb in some cases). |
| GB108 | Is there directional or locative morphological marking on verbs? | Verb | Formation | Not sure |  |
| GB109 | Is there verb suppletion for participant number? | Verb | Index | Not sure |  |
| GB110 | Is there verb suppletion for tense or aspect? | Verb | TAM | Not sure |  |
| GB111 | Are there conjugation classes? | Verb | Verb Type | No | Zhwadi verbs demonstrate the same conjugation patterns. |
| GB113 | Are there verbal affixes or clitics that turn intransitive verbs into transitive ones? | V/erh | Formation | Not sure |  |
| GB114 | Is there a phonologically bound reflexive marker on the verb? | Verb | Index | Not sure |  |
| GB115 | Is there a phonologically bound reciprocal marker on the verb? | Verb | Index | Not sure |  |
| GB116 | Do verbs classify the shape, size or consistency of absolutive arguments by means of incorporated nouns, verbal affixes or suppletive verb stems? | Verb | Index | No | Absolutive arguments are not indexed on or otherwise incorporated into the verb form. |
| $\underline{\text { GB117 }}$ | Is there a copula for predicate nominals? | Verb | Verb Type | Yes | Zhwadi has four different copular verb forms used with predicate nominals: <br> - shā "to be" (generic copula) <br> - kī "to seem, to appear" <br> - gya "to be (short-term or temporary state of being)" <br> - rozhi "to be (long-term or more permanent state of being)" |
| GB118 | Are there serial verb constructions? | Verb | Construction | Not sure |  |
| GB119 | Can mood be marked by an inflecting word ("auxiliary verb")? | V/erh | TAM | Not sure |  |


|  | Grambank Feature | Basic Category | Subcategory | Y/N | Conlang Description and Example(s) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| GB120 | Can aspect be marked by an inflecting word ("auxiliary verb")? | Verb | TAM | Yes | The perfective auxiliary, $\boldsymbol{v i}$, in Zhwadi is primarily used in storytelling and narrations, though it can also be used in other circumstances to disambiguate a present/past interpretation. <br> - tizhó vīl "to have swung" <br> - pyaka aví "she jumped" <br> - zavi leviza "you didn't leap" <br> - firza loví "we didn't harvest" |
| GB121 | Can tense be marked by an inflecting word ("auxiliary verb")? | Verb | TAM | No | Tense is marked as a suffix on the verb. See Feature 084 for more information. |
| GB122 | Is verb compounding a regular process? | Verb | Formation | Not sure |  |
| GB123 | Are there verb-adjunct (aka light-verb) constructions? | Verb | Construction | Not sure |  |
| GB124 | Is incorporation of nouns into verbs a productive intransitivizing process? | Verb | Formation | Not sure |  |
| GB126 | Is there an existential verb? | Verh | Verb Type | Not sure |  |
| GB127 | Are different posture verbs used obligatorily depending on an inanimate locatum's shape or position (e.g. 'to lie' vs. 'to stand')? | Verb | Verb Type | Not sure |  |
| GB129 | Is there a notably small number, i.e. about 100 or less, of verb roots in the language? | Verb | Verb Type | Not sure |  |
| GB130 | What is the pragmatically unmarked order of $S$ and V in intransitive clauses? | Clause | Order | SV | Zhwadi is an SOV language, and that constituent order is followed in pragmatically unmarked instances regardless of transitivity of the verb or status of the clause. |
| GB131 | Is a pragmatically unmarked constituent order verb-initial for transitive clauses? | Clause | Order | No | See Feature 130 for more information. |
| GB132 | Is a pragmatically unmarked constituent order verb-medial for transitive clauses? | Clause | Order | No | See Feature 130 for more information. |
| GB133 | Is a pragmatically unmarked constituent order verb-final for transitive clauses? | Clause | Order | Yes | See Feature 130 for more information. |
| GB134 | Is the order of constituents the same in main and subordinate clauses? | Clause | Order | Yes | See Feature 130 for more information. |
| GB135 | Do clausal objects usually occur in the same position as nominal objects? | Clause | Order | Not sure |  |
| GB136 | Is the order of core argument (i.e. S/A/P) constituents fixed? | Clause | Order | Not sure | For pragmatic purposes, Zhwadi could allow for alternate orders (since arguments and oblique constituents will be marked for their roles). |
| GB137 | Can standard negation be marked clause-finally? | Clause | Negation | Not sure |  |
| GB138 | Can standard negation be marked clause-initially? | Clause | Negation | Not sure |  |
| GB139 | Is there a difference between imperative (prohibitive) and declarative negation constructions? | Clause | Negation | Not sure |  |
| GB140 | Is verbal predication marked by the same negator as all of the following types of predication: locational, existential and nominal? | Clause | Negation | Not sure |  |
| GB146 | Is there a morpho-syntactic distinction between predicates expressing controlled versus uncontrolled events or states? | Verb | Construction | Not sure |  |


|  | Grambank Feature | Basic Category | Subcategory | Y/N | Conlang Description and Example(s) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| GB147 | Is there a morphological passive marked on the lexical verb? | Verb | (Anti)Passive | Not sure |  |
| GB148 | Is there a morphological antipassive marked on the lexical verb? | Verb | (Anti)Passive | Not sure |  |
| GB149 | Is there a morphologically marked inverse on verbs? | Verb | (Anti)Passive | Not sure |  |
| GB150 | Is there clause chaining? | Clause | Construction | Not sure |  |
| GB151 | Is there an overt verb marker dedicated to signalling coreference on noncoreference between the subject of one clause and an argument of an adjacent clause ("switch reference")? | Clause | Construction | Not sure |  |
| GB152 | Is there a morphologically marked distinction between simultaneous and sequential clauses? | Clause | Construction | Not sure |  |
| GB155 | Are causatives formed by affixes or clitics on verbs? | Clause | Construction | Yes | Causatives can be formed with the prefix $\boldsymbol{d a}(\boldsymbol{f})$-, as in datavi "to inspire" ("cause-ignite") and davida "to create" ("cause-exist"). |
| GB156 | Is there a causative construction involving an element that is unmistakably grammaticalized from a verb for 'to say'? | Clause | Construction | Not sure |  |
| GB158 | Are verbs reduplicated? | Verb | Formation | Not sure |  |
| GB159 | Are nouns reduplicated? | Noun | Formation | Not sure |  |
| GB160 | Are elements apart from verbs or nouns reduplicated? | Clause | Formation | Not sure |  |
| GB165 | Is there productive morphological trial marking on nouns? | Noun | Number | No | Nouns only have singular and plural forms. |
| GB166 | Is there productive morphological paucal marking on nouns? | Noun | Number | No | Any paucal marking is carried by a modifier rather than as a bound unit on the noun. |
| GB167 | Is there a logophoric pronoun? | Noun | Pronoun | Not sure |  |
| GB170 | Can an adnominal property word agree with the noun in gender/noun class? | Noun | Property Word | Yes | When adjectives (i.e. not nouns) are used as postnominal modifiers, they agree with the noun in class. See Feature 026 for examples. |
| GB171 | Can an adnominal demonstrative agree with the noun in gender/noun class? | Noun | Demonstrative | No | Adnominal demonstratives attach as prefixed clitics to the noun and do not reflect the noun's class. See Feature 025 for examples. |
| GB172 | Can an article agree with the noun in gender/noun class? | Noun | Article | No | Zhwadi lacks articles. See Feature 020 for more information. |
| GB177 | Can the verb carry a marker of animacy of argument, unrelated to any gender/noun class of the argument visible in the NP domain? | Verb | Index | No | While animacy is one of the index possibilities on verbs, the verb index reflects the noun class of the argument. If the subject of the verb belongs to the animate noun class, the animate prefix marker occurs with the verb. If the subject belongs to the grass class, the grass prefix marker is used. (That remains the case for all eleven noun classes.) |
| GB184 | Can an adnominal property word agree with the noun in number? | Noun | Property Word | No | Modifiers are not marked for plurality to agree with the noun in number. For instance, compare zuki avāzhi "butterfly" and zuki avazhá "butterflies." In fact, when the modifier is a noun itself, it can be marked with number to create a meaningful distinction in some instances (not all): sarā swo "leafy tree (i.e. a deciduous tree)" can be contrasted with saravó swo "leafy tree (i.e. a tree with many leaves on it)". |
| GB185 | Can an adnominal demonstrative agree with the noun in number? | Noun | Demonstrative | No | Adnominal demonstratives attach as prefixed clitics to the noun and do not reflect the noun's number. For instance, compare kol-anjé "this bee" and kol-andiyá "these bees." |


|  | Grambank Feature | Basic Category | Subcategory | Y/N | Conlang Description and Example(s) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| GB186 | Can an article agree with the noun in number? | Noun | Article | No | Zhwadi lacks articles. See Feature 020 for more information. |
| GB187 | Is there any productive diminutive marking on the noun (exclude marking by system of nominal classification only)? | Noun | Formation | Not sure |  |
| GB188 | Is there any productive augmentative marking on the noun (exclude marking by system of nominal classification only)? | Noun | Formation | Not sure |  |
| GB192 | Is there a gender system where a noun's phonological properties are a factor in class assignment? | Noun | Class | Not sure | Probably not since I have so far made class assignments based on semantics. It may be an option for abstract nouns that defy categorization, but I think I'd prefer to stick with finding the closest semantic match. |
| GB193 | What is the order of adnominal property word and noun? | Noun | Property Word | ANM - N | Most adnominal modifiers appear before the noun. See Feature 026 for more information. |
| GB196 | Is there a male/female distinction in 2nd person independent pronouns? | Noun | Pronoun | No | Zhwadi does not mark gender/sex distinctions. |
| GB197 | Is there a male/female distinction in 1st person independent pronouns? | Noun | Pronoun | No | Zhwadi does not mark gender/sex distinctions. |
| GB198 | Can an adnominal numeral agree with the noun in gender/noun class? | Noun | Numeral | Not sure |  |
| GB203 | What is the order of the adnominal collecitve universal quantifier ('all') and the noun? | Noun | Article | Not sure |  |
| GB204 | Do collective ('all') and distributive ('every') universal quantifiers differ in their forms or their syntactic positions? | Noun | Article | Not sure |  |
| GB250 | Can predicative possession be expressed with a transitive 'habeo' verb? | Clause | Possession | Not sure |  |
| GB252 | Can predicative possession be expressed with an S-like possessum and a locative-coded possessor? | Clause | Possession | Not sure |  |
| GB253 | Can predicative possession be expressed with an S-like possessum and a dative-coded possessor? | Clause | Possession | Not sure |  |
| GB254 | Can predicative possession be expressed with an S-like possessum and a possessor that is coded like an adnominal possessor? | Clause | Possession | Not sure |  |
| GB256 | Can predicative possession be expressed with an S-like possessor and a possessum that is coded like a comitative argument? | Clause | Possession | Not sure |  |
| GB257 | Can polar interrogation be marked by intonation only? | Clause | Interrogative | Not sure |  |
| GB260 | Can polar interrogation be indicated by a special word order? | Clause | Interrogative | Not sure |  |
| GB262 | Is there a clause-initial polar interrogative particle? | Clause | Interrogative | Not sure |  |
| GB263 | Is there a clause-final polar interrogative particle? | Clause | Interrogative | Not sure |  |
| GB264 | Is there a polar interrogative particle that most commonly occurs neither clause-initially nor clause-finally? | Clause | Interrogative | Not sure |  |
| GB265 | Is there a comparative construction that includes a form that elsewhere means 'surpass, exceed'? | Clause | Construction | Not sure |  |


|  | Grambank Feature | Basic Category | Subcategory | Y/N | Conlang Description and Example(s) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| GB266 | Is there a comparative construction that employs a marker of the standard which elsewhere has a locational meaning? | Clause | Construction | Not sure |  |
| GB270 | Can comparatives be expressed using two conjoined clauses? | Clause | Construction | Not sure |  |
| GB273 | Is there a comparative construction with a standard marker that elsewhere has neither a locational meaning nor a 'surpass/exceed' meaning? | Clause | Construction | Not sure |  |
| GB275 | Is there a bound comparative degree marker on the property word in a comparative construction? | Clause | Construction | Not sure |  |
| GB276 | Is there a non-bound comparative degree marker modifying the property word in a comparative construction? | Clause | Construction | Not sure |  |
| GB285 | Can polar interrogation be marked by a question particle and verbal morphology? | Clause | Interrogative | Not sure |  |
| GB286 | Can polar interrogation be indicated by overt verbal morphology only? | Clause | Interrogative | Not sure |  |
| GB291 | Can polar interrogation be marked by tone? | Clause | Interrogative | Not sure |  |
| GB296 | Is there a phonologically or morphosyntactically definable class of ideophones that includes ideophones depicting imagery beyond sound? | Clause | Formation | Not sure |  |
| GB297 | Can polar interrogation be indicated by a V-not-V construction? | Clause | Interrogative | Not sure |  |
| GB298 | Can standard negation be marked by an inflecting word ("auxiliary verb")? | Clause | Negation | Not sure |  |
| GB299 | Can standard negation be marked by a noninflecting word ("auxiliary particle")? | Clause | Negation | Not sure |  |
| GB300 | Does the verb for 'give' have suppletive verb forms? | Verb | Verb Type | No | The verb heza "to give" does not have suppletive forms. |
| GB301 | Is there an inclusory construction? | Noun | Formation | Not sure |  |
| GB302 | Is there a phonologically free passive marker ("particle" or "auxiliary")? | Clause | (Anti)Passive | Not sure |  |
| GB303 | Is there a phonologically free antipassive marker ("particle" or "auxiliary")? | Clause | (Anti)Passive | Not sure |  |
| GB304 | Can the agent be expressed overtly in a passive clause? | Clause | (Anti)Passive | Not sure |  |
| GB305 | Is there a phonologically independent reflexive pronoun? | Noun | Pronoun | Not sure |  |
| GB306 | Is there a phonologically independent non-bipartite reciprocal pronoun? | Noun | Pronoun | Not sure |  |
| GB309 | Are there multiple past or multiple future tenses, distinguishing distance from Time of Reference? | Verb | TAM | No | Zhwadi does not distinguish distance from time of reference on the verb (context, adverbs, and other added information can distinguish that where necessary). See Feature 084 for examples of the futurenonfuture distinction. |
| GB312 | Is there overt morphological marking on the verb dedicated to mood? | Verb | TAM | Not sure |  |


|  | Grambank Feature | Basic Category | Subcategory | Y/N | Conlang Description and Example(s) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| GB313 | Are there special adnominal possessive pronouns that are not formed by an otherwise regular process? | Noun | Pronoun | Not sure |  |
| GB314 | Can augmentative meaning be expressed productively by a shift of gender/noun class? | Noun | Class | Not sure | Probably not since the semantics of the noun classes don't lend themselves to diminutive/augmentative readings. |
| GB315 | Can diminutive meaning be expressed productively by a shift of gender/noun class? | Noun | Class | Not sure | Probably not since the semantics of the noun classes don't lend themselves to diminutive/augmentative readings. |
| GB316 | Is singular number regularly marked in the noun phrase by a dedicated phonologically free element? | Noun | Number | No | Singular nouns in Zhwadi are unmarked forms, while plural forms occur with one of five plural suffixes. See Feature 039 for more information and examples. |
| GB317 | Is dual number regularly marked in the noun phrase by a dedicated phonologically free element? | Noun | Number | No | Plural forms occur with one of five plural suffixes, and plurality does not distinguish dual or trial number. See Feature 039 for more information and examples. |
| GB318 | Is plural number regularly marked in the noun phrase by a dedicated phonologically free element? | Noun | Number | No | Plural forms occur with one of five plural suffixes. See Feature 039 for more information and examples. |
| GB319 | Is trial number regularly marked in the noun phrase by a dedicated phonologically free element? | Noun | Number | No | Plural forms occur with one of five plural suffixes, and plurality does not distinguish dual or trial number. See Feature 039 for more information and examples. |
| GB320 | Is paucal number regularly marked in the noun phrase by a dedicated phonologically free element? | Noun | Number | Not sure |  |
| GB321 | Is there a large class of nouns whose gender/noun class is not phonologically or semantically predictable? | Noun | Class | No | While some class assignments in Zhwadi may be more unpredictable or idiosyncratic (e.g. abstract nouns), they are all classified into one of 11 classes with some basic tendencies to match the noun to the class's basic semantic features. See Feature 053 for examples. |
| GB322 | Is there grammatical marking of direct evidence (perceived with the senses)? | Verb | Formation | Not sure |  |
| GB323 | Is there grammatical marking of indirect evidence (hearsay, inference, etc.)? | Verb | Formation | Not sure |  |
| GB324 | Is there an interrogative verb for content interrogatives (who?, what?, etc.)? | Clause | Interrogative | Not sure |  |
| GB325 | Is there a count/mass distinction in interrogative quantifiers? | Clause | Interrogative | Not sure |  |
| GB326 | Do (nominal) content interrogatives normally or frequently occur in situ? | Clause | Interrogative | Not sure |  |

Relative Clause
Yes
Re Y

| Can the relative clause precede the noun? |
| :--- |
| Are there internally-headed relative clauses? |

GB330

| GB330 | Are there correlative relative clauses? | Clause |
| :--- | :--- | :--- | :--- |
| GB331 | Are there non-adjacent relative clauses? |  | clauses require the relativizer kori at the beginning of the clause, and then the relative clause structure follows the typical SOV pattern found in main clauses. In the examples below, the noun being modified is underlined, and the relative clause is in square brackets.

- Pela [kori shokikūm bera aví] chamazdam varín. "The person [who cut sticks] weaves a blanket."
- Pela chamazdam [kori ta ubera] arín aví. "The person wove the blanket that I cut."

Like main clauses, relative clauses can omit the independent subject pronoun. Speakers can choose to include the independent pronouns, as in these modified examples:

- Pela [kori a shokikūm bera aví] chamazdam varín. "The person [who cut sticks] weaves a blanket."
- Pela chamazdam [kori wo ta ubera] arín aví. "The person wove the blanket that I cut."

Relative clauses do not appear before the noun they modify in Zhwadi. The relative clause is treated syntactically distinct from the main clause structure, so there are no internally-headed relative clause structures. There is no anaphoric pronoun in the main clause, so Zhwadi does not have any correlative relative clause structures.
While relative clauses most typically follow the noun they modify, they can occur after the verb of the main clause. This typically occurs when a speaker wishes to add information as an afterthought or when the relative clause is especially heavy. The two examples provided in relative clause is especially heavy. The two exam
Feature 327 can be reworded as the following:

- Pela chamazdam varín [kori (a) shokikūm bera aví]. "The person [who cut sticks] weaves a blanket."
- Pela chamazdam arín aví [kori (wo) ta ubera]. "The person wove the blanket that I cut."

As with the previous examples, the independent subject pronouns are optional, so they are indicated in parentheses in these examples.
Zhwadi is a base-12 language. While multiples of 12 are important for counting higher numbers, multiples of ten are not.
No numbers are formed based on a root of five.
No numbers are formed based on a root of twenty.
No numbers refer to body parts.

| Grambank Feature |  | Basic Category | Subcategory | Y/N | Conlang Description and Example(s) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| GB403 | Does the verb for 'come' have suppletive verb forms? | Verb | Verb Type | Not sure |  |
| GB408 | Is there any accusative alignment of flagging? | Noun | Case/Flag | Yes | $S$ and $P$ arguments are flagged differently: the $S$ argument is unmarked while the P argument occurs with the suffix -(a)m. |
| GB409 | Is there any ergative alignment of flagging? | Noun | Case/Flag | No | $S$ and $A$ arguments are flagged the same (i.e. they are unmarked). |
| GB410 | Is there any neutral alignment of flagging? | Noun | Case/Flag | Not sure |  |
| GB415 | Is there a politeness distinction in 2nd person forms? | Noun | Pronoun | Not sure |  |
| GB421 | Is there a preposed complementizer in complements of verbs of thinking and/or knowing? | Clause | Construction | Not sure |  |
| GB422 | Is there a postposed complementizer in complements of verbs of thinking and/or knowing? | Clause | Construction | Not sure |  |
| GB430 | Can adnominal possession be marked by a prefix on the possessor? | Noun | Possession | No | See Feature 059 for more information. |
| GB431 | Can adnominal possession be marked by a prefix on the possessed noun? | Noun | Possession | No | See Feature 059 for more information. |
| GB432 | Can adnominal possession be marked by a suffix on the possessor? | Noun | Possession | Yes | While inalienable possession does not occur with any suffixes, alienable possession is marked with the genitive suffix on the possessor. See Feature 059 for examples. |
| GB433 | Can adnominal possession be marked by a suffix on the possessed noun? | Noun | Possession | No | See Feature 059 for more information. |
| GB519 | Can mood be marked by a non-inflecting word ("auxiliary particle")? | Verb | TAM | Not sure |  |
| GB520 | Can aspect be marked by a non-inflecting word ("auxiliary particle")? | Verb | TAM | Not sure |  |
| GB521 | Can tense be marked by a non-inflecting word ("auxiliary particle")? | Verb | TAM | No | Tense is marked by an overt suffix on the verb form. See Feature 084 for more information. |
| GB522 | Can the S or A argument be omitted from a pragmatically unmarked clause when the referent is inferrable from context ("pro-drop" or "null anaphora")? | Clause | Construction | Yes | The S/A arguments can be omitted. When the S/A argument is a pronoun, it is typically omitted. <br> - Tivi achún. "The child is sewing." / "The child sewed." <br> - A achún. "He/she is sewing." / "He/she sewed." <br> - Achún. "He/she is sewing." / "He/she sewed." |


[^0]:    ${ }^{1}$ This version is current as of June 2023.

[^1]:    Image 1. WALS map for future tense

[^2]:    ${ }^{2}$ The internal cell-to-cell links do not work in the PDF version. For the more interactive version with all links active, you need to go to the Zhwadi Google Sheet linked in the previous paragraph.

