

When the macaw teaches you to eat the Brazil nut: A concept list for the study of Tupían languages

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Whereas the choice of vocabulary needed for analyses in computational historical linguistics is often determined by criteria like stability and resistance to borrowing, one might also be interested in culturally relevant concepts because of their value for reconstructing the proto-culture and even population movements of individual language families. Having striven to find concepts to which these criteria apply within the Tupían language family, we came up with a list of 447 concepts. This post presents the complete list and then briefly illustrates some of the criteria employed in choosing them.

Introduction

The [Tupían language family](#) is not only the largest language family in South America with respect to the number of extant languages (Rodrigues 1999; Rodrigues & Cabral 2012; [Galucio et al. 2015](#)) but also by far the most wide-spread language on the continent, being spread across 4000 km ([Iriarte et al. 2017](#)). Some of the Tupían languages have gone extinct by now, for some the number of speakers is as low as three (e.g. Akuntsu), while still others count as many as six million and enjoy the status of an official language (Paraguayan Guaraní, [Eberhard et al. 2021](#)). Although being of interest to linguists, archaeologists, and anthropologists, until recently, this language family lacked a comprehensive lexical database free for access and reuse. This shortcoming was addressed by the publication of the Tupían Lexical Database ([TuLeD](#), [Gerardi et al. 2021](#)) which is a collection of lexical items in Tupían languages.

The reconstruction of Proto-Tupí, the ancestor of all Tupían languages, is clearly of great importance to the scientific community. Taking form and meaning into account, it

has been possible to reconstruct about three hundred concepts in Proto-Tupí based on cognates ([Corrêa-da-Silva 2011](#); Rodrigues & Cabral 2012). The reconstructed items cover a plurality of semantic fields: agriculture, natural phenomena, food-processing, pottery, cooking, housing, handicraft, hunting and fishing, kinship terms, social relations, clothing and grooming, the body, vegetation, and function words. Most of these words are typically not found in the classical basic vocabulary lists which are very popular now to study the phylogeny of large datasets for particular language families. Since these concepts that reflect the culture and anthropology of the Tupían languages are of great importance for studies that go beyond phylogenetic reconstruction, we decided to the idea proposed by Matisoff ([1978](#)) by compiling a list that would not only allow us to cover basic vocabulary items in the Tupían languages but also contain culturally relevant concepts in Tupían societies (Rodrigues 2010). The list we compiled thus intends to facilitate not only linguistic but also cultural reconstruction. As a result, it does not only contain well-known lists of basic vocabulary items like the 100-item list by Swadesh (Swadesh [1955](#), 1971) or the so-called [Leipzig-Jakarta](#) ([Tadmor et al. 2009](#)) list, which is supposed to provide items resistant to borrowing, but also many concepts which may be exclusively interesting for the study of the Tupían language family.

The New Concept List

The new concept list consists of 447 items and is submitted along with this blog post. The concepts in English are presented along with the respective Portuguese translations, semantic fields, links to the concept identifiers provided by the [Concepticon project](#) (Version 2.5, [List et al. 2021](#), see [List et al. 2016](#) for more information on the Concepticon), and links to the [Encyclopedia of Life](#) (EOL) for flora and fauna items. What may, at first, look like a list of disparate concepts reveals a network of hidden connections that also captures the current and past traditional practices of the Tupían groups. In order to justify the choice of some of the concepts, a couple of examples are provided below.

Food, beverages, cooking techniques, flora, and fauna items that are common to the Tupían populations go beyond the needs of historical linguistics and are a source of a different kind of evidence relevant to the reconstruction and to the knowledge of cultural traits presented in the Proto-Tupí society. Based solely on the usage and names of the flora items in Tupí-Guaraní languages, for example, have been used to infer movements and contact of populations, thus indirectly providing relevant information for historical linguists (Balée 1988; Balée & Moore 1991; [Balée 1994](#); [Balée 2000](#); [2013](#)). For this reason, we decided to include concepts such as CHICHA (Item No. 73, Concepticon ID

[441](#)), CEDRELLA ODORATA (Brazilian cedar) (Item No. 71), and MANIOC (Item No. 218, Concepticon ID [927](#)).

Flora items and their names are further helpful in understanding the origins, mythology, and traditions of indigenous peoples uncovering knowledge beyond the reach of archaeology. This also applies to the cultural items. The preparation of *chicha* (fermented or non-fermented drink of Amazonia and Andes), for example, as well as the type of pottery used to make *chicha*'s bowls distinguish some of the groups (c.f. the interesting work by [Noelli 2018](#)). Another example comes from different species of birds whose plumage is used by many Tupían groups, including blue-and-yellow and red-and-green macaw ([Corrêa-da-Silva 2013](#)). Thus, the inclusion of concepts such as BLUE-AND-YELLOW-MACAW (Item No. 214), RED-AND-GREEN MACAW (Item No. 417), and PARROT (Item No. 253, Concepticon ID [882](#)).

Babaçu ([Attalea speciosa](#), Item No. 21) and Brazil nut ([Bertholletia excelsa](#), Item No. 51) (see [Staeck 2019](#): 100-104) are primarily gathered as food. For the Akuntsú people (Tupari subfamily), this applies not only to the nut itself but also to its oil. Yet these nut trees permeate the communities on different levels. Bracelets are crafted from the Brazil nut's bark and it also functions as an indicator of game. They also form an integral part of the traditional narratives. For the Makurap people (Tupari subfamily), the Brazil nut tree is central in establishing metaphysical relations ([Mezacasa 2021](#)). The Brazil nut tree plays an important role in Ka'apor (Tupí-Guaraní subfamily) myths, even though it is not found in this group's territory. It is a sign of the group's origin in the West ([Balée 1994](#)).

The chain of associations does not stop there. The macaws, both the blue-and-yellow and the red-and-green ones, are also associated with the nuts. The macaws are traditionally valued by Tupían groups for their plumage. But among the Zo'é (Tupí-Guarani subfamily), other aspects are also highlighted. The most famous graphic pattern used in body and arrow painting is the *kaninin rowa*, "blue-and-yellow macaw cheek" (Pedreira 2019). Furthermore, according to Zo'é myths, the red macaw is one of the animals that teach humans to consume Brazil nuts ([Braga 2017](#)).

In general, animals and insects are inseparable from the daily lives and rituals of the people in Amazonia. Besides the macaws, different species of ants like the *large bullet ant* or *tucandira* (Paraponerinae), acquire symbolic significance. The Sateré-Mawé (Mawé subfamily) group, for example, requires boys reaching puberty to participate in an initiation ceremony that tests their ability to endure the painful bites of the bullet ants ([Carmo & Helene 2020](#)). On the other hand, insects like mosquitoes and pioms

(Simuliidae), are perceived as nothing but harmful and are fought against and kept away from the houses with smoke. Accordingly, we have added items such as: PARAPONERINAE (Item No. 199), TAPIR (Item No. 347, Concepticon ID [312](#)), PIUM (Item No. 152), EAGLE (Item No. 418, Concepticon ID [1905](#)) to our concept list.

Since most of the groups rely heavily on hunting and gathering, it is important to examine the various relations these groups form with the flora as cornerstones of their respective identities. For example, Cedar, Embaúba, and Inga mark and cement the relation of the Tupian groups with their territories. Yet when a group decides to move to a new area, tools like the gridiron prove their usefulness as this traditional tool for roasting makes the food suitable for long-term consumption. Not only game but also fish come on the gridiron, and among the latter one finds hoplias (usually covered by pacova leaves). For some Tupian groups of the upper part of Xingu rivers, hoplias' teeth are used to produce small wounds on the body ([Baldus 1970](#)). Given these facts, concepts such as the following have been included: GRIDIRON (Item No. 429), INGA (Item No. 188), PACU (Item No. 249, Concepticon ID [3922](#)), CATFISH (Item No. 200, Concepticon ID [3777](#)).

Conclusion

The concept list presented above is only a part of a larger project on Tupian peoples and their cultural forms that strives to become the confluence for contributions from a wide variety of disciplines. Although its initial inventory of vocabulary items adhered to the established Swadesh and Leipzig-Jakarta lists, the slow but steady growth of the inventory of culturally relevant items in the database, including the selection presented above, is an important step in the process of documenting and preserving the heritage that would otherwise remain inaccessible and provides (hopefully, useful) resources for other fields to work with.

Supplementary Material

The concept list which supplements this study can be downloaded from <https://calc.hypotheses.org/files/2021/10/Gerardi-2021-447.csv>.

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