

Institution: University of Surrey		
Unit of Assessment: 27 English Language and Literature		
Title of case study: Resources for the Nuer Language: Overcoming the challenges of morphological complexity		
Period when the underpinning research was undertaken: 2010 - 2019		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Matthew Baerman	Principal Research Fellow	1999 – present
Oliver Bond	Reader	2012 – present
Greville G. Corbett	Professor	1974 – present
Irina Monich	Research Fellow	2015 – 2018
Period when the claimed impact occurred: 2018 -2020		
Is this case study continued from a case study submitted in 2014? N		
<p>1. Summary of the impact (indicative maximum 100 words)</p> <p>Nuer is one of the major languages of South Sudan, spoken also by a global diaspora displaced due to decades of ongoing conflict and civil war. The written word, via social media, plays a major role in maintaining cohesion within this community, but due to the phonological and morphological complexity of the language, the writing system remains unstandardised, and learning resources are minimal. Our research has enabled us to develop resources for new language support initiatives, including an instructional book and a community-based interactive lexicon, paving the way for advances in literacy.</p>		
<p>2. Underpinning research (indicative maximum 500 words)</p> <p>Nuer is a language of the West Nilotic family, spoken by somewhere between one and two million people in East Africa, primarily in South Sudan and adjacent parts of Ethiopia. The Surrey Morphology Group's research on the language began within the context of an ERC-funded project (2009-13), awarded to Professor Corbett (PI) and Dr Baerman (researcher), which investigated morphological complexity from a broad cross-linguistic perspective, embracing well over 100 languages. Nuer emerged as a key case study in this project, because its morphology reaches a degree of complexity with few parallels in other languages. In part this is due to its unpredictability – for example, virtually every noun has irregular inflection. And in part this is due to the way this inflection is expressed, through modulations of vowel length, tone, and still more elusive properties such as phonation type (breathy vs. modal voice).</p> <p>The previously unrecognised significance of this system was brought to the attention of linguistic theory in outputs generated by this project [R1, R2, R3]. The theoretical and typological claims advanced there are now widely cited in the literature on morphological complexity.</p> <p>Our initial research was based on previously-published material, which was limited in scope. This inspired us to launch a new AHRC-funded project (2015-18), awarded to Dr Baerman (PI) and Dr Bond (CI), with a focus on fieldwork, in order to collect and analyse primary data. We planned to</p>		

do this work in South Sudan, but civil war broke out there shortly after the submission of the grant application, so the research was conducted among the diaspora, initially in the UK, but primarily in Kenya (by the project PhD student, Tatiana Reid), and various locations in the US (by Dr Monich, the postdoctoral researcher), both countries where there is a sizeable refugee community.

This project allowed us to make substantial advances in our understanding of the language. Starting with a careful instrumental analysis of speech sounds, we have exhaustively characterised the phonological system, establishing the existence of three degrees of vowel length and three contrastive tonal distinctions. This in turn has allowed us to accurately describe the morphological processes and inflection classes [R4, R5]. We have clarified the functions of verbal forms and identified previously undescribed grammatical categories, opening up new avenues for syntactic discoveries. We have also identified key differences between the three major dialect groups.

Besides feeding into publications, the results of our research form the basis of an online morphological lexicon [R6], which makes this wealth of theoretically challenging material freely available to the scholarly community. As noted in Section 5, this lexicon has been designed not only as an open access repository for our research, but also so that it serves as a resource for the world-wide Nuer community.

3. References to the research (indicative maximum of six references)

[R1] Baerman, M. 2012. Paradigmatic chaos in Nuer. *Language* 88(3). 467–94. Project MUSE DOI: [10.1353/lan.2012.0065](https://doi.org/10.1353/lan.2012.0065)

[R2] Baerman, M. 2015. *The Oxford Handbook of Inflection*. Oxford: OUP. ISBN: 9780199591428, DOI: [10.1093/oxfordhb/9780199591428.001.0001](https://doi.org/10.1093/oxfordhb/9780199591428.001.0001)

[R3] Baerman, M., D. Brown & G. Corbett. 2017. *Morphological Complexity*. Cambridge: CUP. ISBN: 9781107120648

[R4] Baerman, M., I. Monich & T. Reid. 2019. Nominal inflection classes in verbal paradigms. *Morphology* 29(3). 317–335. DOI: [10.1007/s11525-019-09342-5](https://doi.org/10.1007/s11525-019-09342-5)

[R5] I. Monich & M. Baerman. 2019. Stem modification in Nuer. In E. Clem, P. Jenks & H. Sande (eds), *Theory and description in African Linguistics*, 499–520. Berlin: Language Science Press.

[R6] Bond, O., T. Reid, I. Monich & M. Baerman. 2020. *Nuer Lexicon*. www.nuerlexicon.com (interactive online dictionary)

Funding:

ERC FP7-IDEAS 2009 to 2015 €1,712,538, PI: G. Corbett. (University of Surrey)

AHRC AH/L011824/1 2015 - 2019 £510,128 PI: M. Baerman (University of Surrey)

4. Details of the impact (indicative maximum 750 words)

The Nuer people face difficult challenges in supporting literacy in their language. Although a writing system was developed in the mid-20th century, the phonological and morphological complexity of the language has posed significant challenges for codification, and it has never been fully standardised. Efforts to remedy the situation have effectively stalled within South Sudan, owing to

ongoing unrest and lack of financial resources. Learning materials are minimal, inconsistent in terms of their alphabets and spelling conventions and difficult to access.

Our work with diaspora communities addresses these issues through language support activities and resources developed as a result of our phonological and morphological analyses of different Nuer dialects. The impact of our work is achieved through the provision of physical and digital resources, through facilitation of community outreach activities, and through speaker engagement with our online resources and community group.

Physical materials for heritage learners/Community workshops

Like many immigrant communities, Nuer in the diaspora include a growing body of heritage speakers whose contact with the language is restricted to the family environment. There is strong motivation in the community to promote social cohesion through mother tongue literacy, but the sorts of resources that might normally be used to support learning and teaching of a language are lacking. To advance community goals to actively maintain Nuer usage in the diaspora, we first took steps at a local level, during our collaboration with communities in Southern California and in Nebraska, both major centres for East African refugee resettlement in North America. We produced a booklet on writing and grammar, reflecting our analyses of the phonological and grammatical system [S1]. To be maximally inclusive, the booklet and accompanying workshop included discussion of dialectal differences identified in our research and proposed spelling reforms for the otherwise neglected West Nuer dialect. This was presented and discussed at three community workshops in 2018 held in San Diego (California), Lincoln and Omaha (Nebraska). A total of 130 community members participated in the workshops, where we distributed 280 copies of the booklet, which was designed to support both heritage learners and native speakers [S2]. The booklet is actively used in home instruction; in a recent call, John Kuek, psychologist at the La Maestra Community Health Center in San Diego and a prominent community organiser, told us *“I have been teaching my kids. It's a very cool booklet you put together. It's very helpful, I'm telling you.”*

Digital resources for the global Nuer community/Online engagement

A major outcome of our research was a sizeable corpus of fully-inflected nouns and verbs [S3] that has been optimised for the practical use of the Nuer community as the first searchable online Nuer-English dictionary. The website Nuer Lexicon was launched in September 2020 and by the end of 2020 had been visited by an average of 413 users per month in 63 countries worldwide, with the greatest activity recorded for three diaspora target groups in the USA, Kenya and UK. In this period South Sudan and Ethiopia were in the top 7 countries for bandwidth and hits [S4]. The site was launched with over 800 lexical items, exemplified by over 1,100 noun and verb paradigms and 1,400 audio recordings and examples. Users can search in Nuer and English and toggle between results in two modes, one aimed at Nuer speakers, rendered in our version of the practical orthography, and another aimed at linguists using transcriptions in the International Phonetic Alphabet. The interactive interface allows users to reveal morphological patterns such as tone and vowel length alternations that are otherwise opaque to learners, since they are obscured by the writing system. The lexicon is designed to be an interactive and growing resource. Users are able to offer corrections to existing entries and to suggest new entries and example sentences. Up to the end of 2020, 103 new items were incorporated based on community suggestions, from speakers based in South Sudan, Kenya and the USA. To further facilitate community engagement, we have established a Facebook group (with 131 members by the end of 2020) as a forum for our Nuer beneficiaries to discuss norms, definitions and spelling conventions [S5]. If user engagement continues to confirm its value, we will engage with the authorities in South Sudan to expand its use to educational ends. Tanya Spronk, Literacy and

Education Coordinator for the Summer Institute of Linguistics in Juba, South Sudan (the major promotor of literacy efforts in the country), writes “*something like this dictionary could become a spelling authority [...] there is still nothing else like it that I know of in any South Sudanese language!*” [S6]. Jimma Guicwang, Nuer language interpreter for the United Nations High Commissioner for Refugees and other NGOs, writes “*Now, I will not be worry about where I will go for help or asking Nuer speakers to get the similar translations both English and Nuer vocabularies words because the Nuer Lexicon online dictionary will keep providing me the meaning words without difficulty.*” [S7]. Besides its usefulness as a language resource, the lexicon has emerged as an expression of cultural pride, and user response has been enthusiastic, as one user commented: “*I just wanted to say thank you to everyone that involved large and small to make this wonderful language and loving language accessible online to many millions of people around the GLOBE.*”

5. Sources to corroborate the impact (indicative maximum of 10 references)

- [S1] Nuer grammar booklet (extract) developed by University of Surrey, 2019. (PDF)
- [S2] Testimonial from member of Nuer community in San Diego on the Nuer grammar booklet, 2019. (PDF)
- [S3] Interactive Nuer Lexicon website (<https://www.nuerlexicon.com>).
- [S4] Web statistics on usage of Nuer Lexicon website for 2020 (S3) (PDF)
- [S5] Nuer Lexicon facebook group (www.facebook.com/groups/nuerlexicon)
- [S6] Testimonial from Tanya Spronk, the Literacy and Education Coordinator for the SIL, South Sudan (PDF)
- [S7] Testimonial from Jimma Guicwang, Nuer-English interpreter in Nairobi (PDF)