Orthography Challenges in Khoisan Literacy: The Case of Gǀui and Gǁana Communities

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The Gǀui and Gǁana speech communities belong to the Khoe-Kwadi family of Khoisan languages which have not experienced development like other languages in Southern Africa, with the possible exceptions of Nama and Ju/'hoan in Namibia. When the Botswana Government decided to implement the Languages in Education Policy, there was a need to establish the vitality of all local languages with the view to include those that hitherto were not used as a medium of instruction in primary schools. Using historical sources and qualitative analysis of the vitality survey, the paper discusses the challenges faced in developing orthographies for Khoisan languages in general and Gǀui and Gǁana in particular. The paper argues that Giui and Glana should adopt a common orthographic convention and that there is a need to harmonize such.

Keywords: Khoisan, Botswana, Orthography, languages in education policy, Giui and Glana

1. Introduction

Botswana, a medium-sized country that is almost entirely covered by the Kalahari Desert, has been home to Khoisan communities for many thousands of years (Iliffe, 1995). Leonhard Schultze (1928: 211) was the first to coin the term “Khoisan” and wrote it as “Koïsan”. Schapera (1930) popularized it as “Khoisan”. However, it is not a language name, but a convenient collective term used by linguists and anthropologists to refer to hunter-gatherers and pastoralists who speak click languages such as Nama, Naro, Ju/'hoansi, and many others. Consequently, “Khoisan” has no meaning to speakers of these languages as no one will associate it with his/her language.

With the 13 Khoisan languages split into many varieties, Botswana is a country with the greatest Khoisan linguistic and ethnic diversity in Africa. These speech communities are found in the Ghanzi area, Central Kalahari, Eastern Kalahari, Northern Botswana, Northwest, Central District, etc. This article focuses on Khoisan languages in general and on the Gǀui- Gǀana speech communities in particular. The Glana speech community is found in Molapo, Thomelo, and NewXade villages whereas the Gǀui community is found in Khute, Thomelo and NewXade villages. Documentation work on Khoisan languages (Westphal, Traill, Vossen, Guldemann, and Vossen) has settled the classification of these languages. It is now established that Nama, Naro, Buga, Shua, Glana, Glui, and Kua to name a few, belong to the Khoe-Kwadi language family and have not borrowed Person Gender Number markers, even though socio-culturally there will be marked differences (Westphal, 1962; 1971; Traill 1986; 1997; 1974; Guldemann and Vossen, 2000). After Khoisan language families were proposed, linguistic studies were undertaken for individuals as well as language groups (Traill 1986; Gündemann et al. 2000; Vossen 1998; Dornan 1917). As such Khoisan studies have advanced since Schultze (1928), Schepera (1930), Bleek (1930), and Köhler (1981).

The paper is structured in sections that examine some of the ways that such challenges can be appreciated, and the final solution is to suggest a harmonized orthography to promote a common
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writing system for these languages whose speakers are still illiterate. One of the objectives is to provide some impetus in the promotion and adoption of a harmonized standard orthography for these languages to develop literacy materials and join the other languages in school literacy programmes for the local languages of Botswana. The article discusses the issues of orthography challenges in Khoisan literacy according to the following structure. Section 1 looks at the introduction and provides background information about the Khoisan languages of Botswana. The section on Khoisan orthographies guides the discussion on what justifies the high illiteracy amongst many of the Khoisan communities especially the ones with no orthographies. The next section is on literacy among Khoisan speech communities. On the other hand, section 4 looks at the Khoisan sound system. Furthermore, section 5 discusses the survey on Khoisan orthographies which leads to another important section that discusses the Khoisan alphabetic symbols for a harmonized orthography. Thereafter, the challenge of the phonetic versus Roman alphabets is discussed and practical suggestions are presented. The next section discusses orthography strategies for literacy. Then a conclusion is made on the discussions of the article.

The objectives of this paper are to:

i. discuss challenges in planning the development of an orthography system for two languages, Gǀui and Gǀana.
ii. provide some impetus in the promotion and adoption of a harmonized standard orthography for these languages.

Below is a map that shows some of the Khoisan languages discussed in this paper.

Figure 1: Map of Khoisan languages of Botswana
Note that Gǀui is found together on the map with Glana.

1.1. **The Situation of Khoisan in Botswana.** In Botswana and elsewhere in the region, written documents commonly use the conventional generic term, ‘Basarwa’ (cf. Cassidy et al (2001: 1), citing the Remote Area Dweller (RAD) programme that the Government of Botswana instituted in 1974. They also make use of the term “Bushman” which connotatively has a similar socio-cultural value when used by non-Khoisan people (Chebanne, 2020). The term ‘Basarwa’ may be understood using the phonology of Setswana, in which the -rw should be considered a phonological evolution from the Bantu –Twa. The –sa- a possible genitive from a class seven prefix, designating a person of despicable qualities, was probably added during the earlier contact situations. The Sa-Rwa would therefore be a derogatory designation of what was the “–Twa”. This –twa is also found in the designation of the cardinal point south in Setswana, “bo-rwa”. It can therefore be further deduced that there was an intermediary stage when there were “Ba-Rwa”, Southerners, and later, “Ba-sa-Rwa”, ‘people of the despicable manners of the Southerners’. This would then not make “Basarwa” a term that can be rehabilitated for Khoisan as it has the semantic value of the “Bushmen” or the “uncultured”. As Vossen (1998:18) observes, “Sarwa is a cover term…so we do not know which particular Sarwa group or dialect is referred in each case”. The hunter-gatherers, for instance, would speak a language akin to pastoralists and fishermen. Among themselves, these people use other terms to designate themselves and their fellow Khoisan by diverse names. It is therefore not readily settled which name should be used when collectively referring to them.

Currently, there are various community-based efforts and regional advocacy institutions for the promotion and revival of Khoisan languages. These initiatives are highly commendable and will need support. Linguists can assist in many regards such as availing their publications to concerned speech communities. The development of lexicographical work can enhance the preservation of these languages. Linguists also need to work with communities to standardize and harmonize Khoisan orthographies so that they become resources for the development of literacy programmes and engaging speakers in broadening language use domains (such as modern language communication technologies in audio and visual media).

2. **Khoisan Orthographies**

The outcome of the survey done by Chebanne and Mogara in 2022 indicated that Khoisan languages have no orthographies and speakers of most of these languages are highly illiterate and cannot transfer literacy skills acquired from Setswana into their languages. This is because Khoisan languages have sounds such as clicks and their accompaniments that are difficult to represent in a practical orthography (Chebanne and Mathangwane, 2009).

Khoisan languages have lagged in orthography development and promotion of literacy (cf. Chebanne 2007, 2003, Andersson & Janson 1997; Batibo 1998). The reasons for this under-development are explained by socio-historical and language policies that have marginalized them. Consequently, they are excluded from specific language, social, and cultural developments that should sustain their existence as distinct ethnic communities (cf. Mogara 2022; Barnard 1988; Sommer 1992; Smieja 1996). For a long time, it has been accepted in all countries where Khoisan communities are found that educating them in the languages of their neighbours was sufficient (Janson 2000). For the many centuries that most African languages have been written down, Khoisan languages, except for a few, have been largely neglected (Chebanne 2009; 2015). This
situation has translated into the abandonment of the development of Khoisan languages for literacy. For example, there had been no community-based initiatives such as bible translations that were done elsewhere. These languages include Giui- Glana, Shuakhwe, Danisi, and Cirecire etc.

2.1. **Giui-Glana.** Giui-Glana has been extensively documented by anthropologists and linguists. One of the main contributors was anthropologist Silberbauer who in 1961 produced a report for the British government which sought to establish the Central Kgalagadi Game Reserve as their homeland. Other anthropologists include Tanaka and Saugestad. These anthropological studies have discussed contact situations with the main line (Setswana) society which put these Khoisan communities at a linguistic and social disadvantage. A consequence of the contact is assimilation which has resulted in the loss of their languages and cultures.

Apart from anthropologists, linguists such as Westphal (1995), and Traill (1986, 1997) had shown interest in these languages. These earlier linguists helped to classify these languages under the Khoe-Kwadi language family. Recently, focused linguistics documentation on Giui-Glana has been undertaken by Hirosi Nakagawa (2006) who produced work on the phonetics and phonology of these languages. However, these works are purely linguistic, and they are written using the IPA conventions that communities are not familiar with and there are no school languages that provide an understanding of clicks. This problem has been discussed by Chebanne and Mathangwane (2009) who regretted that linguists are often not interested in community-based orthography and literacy development.

The lack of use of these languages in education has made speakers of these languages believe that their languages are very difficult to write. This is exemplified by the Glana of New Xade and CKGR who have the poorest literacy skills as they do not know how to represent the four clicks in their language and cannot transfer literacy skills from other languages into theirs. In the survey by Chebanne and Mogara (2022), it was noted that the Ju of Grootlagte could transfer literacy skills from Naro to their language even though they do not have their orthography. Also, the Buga of Okavango managed to transfer literacy skills from !Xun in Namibia to Khwedam. The Giui community also has orthography challenges although they have an idea of how clicks are written. Motivated Glana writers used symbols such as X, XL, KL, and TX for all click representation — a serious literacy challenge. It is only in 2022, that the Government of Botswana has come up with an inclusive language policy that will cater for all languages in the education system at the lower primary level.

3. **Literacy among Khoisan speech communities**

The history of the development of Khoisan languages through writing is characterized by disinterestedness and marginalization (Chebanne, 2015; 2010). Only Khoekhoegowab (Nama-Damara of Namibia) has a writing system dating from the late 19th century. Currently, there is no common Khoisan writing system in practical use. A common writing system is construed to refer to common alphabetic symbols that would facilitate language-specific writing rules. The lack of a common Khoisan writing system can be explained by poor language development resulting from
the poor sociolinguistic state in which early codifiers of African languages found the Khoisan languages (cf. Chebanne & Mathangwane 2009). In Botswana where Khoisan languages are not catered for in language policy development, nothing is being done to document and codify these languages. Education has made the Khoisan illiterate in their languages mainly because they have come to believe that their languages are not as important as the official and national languages since they are not used in official domains. In Southern Africa, most Khoisan languages except a few have had an interest in missionaries wanting to develop religious materials. In East Africa, missionaries such as Daniel & Elisabeth Hunziker and Helen Eaton are at work on the language development of Sandawe (Hunziker, 2008). For Khoisan languages, linguists have made more documentation of authentic indigenous text than missionaries (cf. Bala (1998) for Hadza, Collins & Namaseb (2011) for N|uu, ǂHoan, Anne-Maria, Fehn for Ts'ixa, ||Xegwi).

For a long time, it has been accepted in all countries where Khoisan communities are found that educating these communities in the languages of their neighbours was good enough (cf. Janson 2000, Chebanne 2010). This was thought to facilitate their socio-economic integration into mainstream society. Even after independence, the issues of language rights and language-use planning were not envisaged for the Khoisan language communities in Botswana. Except for Nama-Damara (Khoekhoegowab), Ju’hoansi, and Naro (which have functional orthographies), all other Khoisan languages have been neglected. In most of these languages, what exists are linguistic texts which do not in any way account for orthography. Due to the lack of a language-development policy framework in existence, linguistic research on Khoisan languages and literacy development by missionary societies have not improved the neglected state of these languages by failing to develop their writing systems. The current language in education practice that is being replaced by the new language policy in education did a lot of damage and the impact was huge among the Khoisan languages. Revitalizing Khoisan for literacy will be a struggle for researchers and speakers. Also, the transfer of literacy skills from Setswana to Khoisan languages is not taking place for the reason that Khoisan and Bantu languages share very limited phonology, and the school has not yet done anything to facilitate this awareness.

The successful creation of a writing system involves the consideration of historical, religious, cultural, identity-related, and practical factors in addition to linguistic ones (Chebanne and Mathangwane, 2009). Although writing in the mother tongue is an important linguistic right, literacy can only be successful if there are adequate and varied readings (and instruction) available. This means that the potential role and scope of literacy (as a social practice rather than a technical skill) needs to be evaluated before writing system development and that choosing symbols to write must be embedded with care into the larger task of ‘corpus planning’ (Kloss, 1968, Friederike Lüpke, 2009: 1). At the language policy level, the lack of a common writing system impedes development and constraints cultural activities in Khoisan languages, which are not enabled to access functional social domains. This point has been evident in the research by Batibo (1998) and the arguments put forward by the speakers themselves in Kamwendo et al, (2009). Generally, Khoisan small speech communities such as the Gǀui and Gǁana have difficulties in advocating for the writing systems for their languages (Chebanne & Mathangwane, 2009). Research has shown that the socio-historical situation of Khoisan speech communities makes these languages lag in Mother Tongue Education in elementary schools (cf. Kamwendo et al. 2009; Pamo, 2011). The functionality of Khoisan languages is, therefore, being usurped in vital and critical communication domains – family, social, and personal. Importantly, as these communities are marginalized, especially in this complex situation where languages of wider communications take the upper hand, lack of resources is the main issue here. Khoisan languages are usually spoken by very small populations of politically
marginalized people, generally living dispersed over wide areas, many times crossing multiple regional and national boundaries (Batibo 1998). The lack of political will along with the complex sound systems of Khoisan languages seems to explain the lack of language development (Chebanne, 2010).

Another point is that these communities live under the hegemonies of other language communities (Janson, 2000). Also, because of not having any official domains of use, the speakers of these languages have developed negative attitudes towards them and as such consider them not useful to their social advancement as observed in the Gǀui and Gǁana communities. This condition marginalizes these languages in important ways. As a consequence, some have incongruous orthographies. Those African languages that have been written for over a century do not want to yield to the harmonization of their orthographies developed by different groups of linguists or missionaries (cf. Chebanne & Mathangwane 2009, Chebanne et al. 2008). This has derailed the focus on vital issues of shared development and the adaptation of language development policies that would benefit all of these languages, big or small. The Working Group in Indigenous Minorities in Southern Africa (WIMSA) published the Penduka Declaration (2001) with the hope of standardizing Ju and Khoe language orthographies. This helped with the development of literacy works in these languages (see Biesele 1998, 2009). Other researchers on the development of African language literacy have also demonstrated that the sharing of common orthographic resources was beneficial to linguistic minorities (Prah, 2000).

While it is true that Language development has taken place in other parts of Africa without harmonized orthographies, the fact is that such developments have confined themselves to restricted geographical boundaries and are a source of African languages faring badly in taking the status of languages of wider communication. Even languages of bigger clusters have failed to supplement European languages because of disjointed writing system developments (Prah, 2000; Chimhundu, 1997). When developing orthographies for Khoe languages such as Cua, Tsua, and Kua (an actual language cluster), which are currently under documentation, (see Chebanne, 2010) a harmonized standardized writing system will facilitate their literacy development (Cameron, 2002). However, it must be clarified here and for the rest of the paper that harmonization does not entail convergence – different languages will still speak their languages and write their languages – but using the same alphabet. That is the essence and the spirit of harmonization (Prah, 2000). This is important because many distracters have argued that in harmonization, languages are converged which is far from the enterprise of harmonization with common writing resources, such as an alphabet (Chimhundu, 1997). Khoisan languages will see their linguistic differences maintained; however, they readily access literacy development resources from the common Khoisan writing system pool.

4. **Khoisan sound system**

Despite different origins and different grammatical structures, Khoisan languages have common linguistic characteristics, especially in phonology. These include complex consonant inventories with clicks. Therefore, all Khoisan languages are unique and are characterized by the use of click sounds. The six clicks (dental, lateral, palatal, alveolar, retroflex, and bilabial) can be produced with different settings of phonation (aspirated, glottalized, voiced stops, etc). These sounds are represented by IPA symbols which many people find difficult. In addition to the clicks, most Khoisan languages have a five-vowel system that has different accompaniments such as nasalization, pharyngealisation, and a combination of both nasalization and pharyngealization.
However, Khwe and Ts’ixa have six vowels as pointed out by Anne-Maria, Fehn in her thesis.

The IPA has not developed better ways of distinguishing sounds in these languages partly because there are few researchers with a particular interest in phonetics or phonology who have worked on more than one Khoisan language. Also, contrasts found in languages such as !Xôô and !Hoan are not yet understood across the Khoisanist community as a whole. The other issue in Khoisan phonology is that, for instance, the Gǀui uvular ejective click, e.g. !q’ differs from the Nǀuu uvular ejective click !q’ in terms of timing. In Gǀui, the uvular release is near the click release, whereas in Nǀuu it is long enough after the click release for it to be audible as a distinct stop. That is, even though the IPA transcriptions of these sounds are identical, one sounds like a single click burst, and the other sounds like a click followed by an ejective. The sounds do not sound the same while the articulatory components are the same. Because the timing is different, the sounds are phonetically not the same. Gǀui, !Xôô, and a few other languages with small numbers of speakers have a contrast of velar and uvular places of articulation in clicks. Most other Khoisan languages do not appear to contrast these places of articulation in clicks (see Miller et al. 2007, 2009; Collins & Levi Namaseb, 2011). These issues pose challenges not just to phonology but also when a writing system is considered. As it will be argued later, what is linguistically acceptable as sound representation can be used in harmonization. The table below adapted from Chebanne (2015) shows the consonants to be expected in Gǀui and Gǀana languages but since from the survey, it was clear that IPA will be problematic for these communities, the Naro convention which they understand better will also be shared.
Table 1: Consonant system of Gǀui and Gǁana (modified and summarized from Nakagawa 2006)

<table>
<thead>
<tr>
<th>consonant type</th>
<th>bilabial</th>
<th>dental</th>
<th>alveolar</th>
<th>lateral</th>
<th>alveo-palatal</th>
<th>alveo-palatal</th>
<th>palatal</th>
<th>palatal cons.</th>
<th>velar</th>
<th>uvular</th>
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<tbody>
<tr>
<td>voiceless stops</td>
<td>p</td>
<td>t</td>
<td>l</td>
<td>!</td>
<td>ts</td>
<td>t</td>
<td>c</td>
<td>k</td>
<td>q</td>
<td></td>
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<tr>
<td>aspirated stops</td>
<td>h</td>
<td>th</td>
<td>lh</td>
<td>!h</td>
<td>tsh</td>
<td>th</td>
<td>ch</td>
<td>kh</td>
<td>qh</td>
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<tr>
<td>delayed aspiration</td>
<td>’h</td>
<td>’h</td>
<td>’h</td>
<td>’h</td>
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<td>ejective stops</td>
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<td>’</td>
<td>’</td>
<td>’’</td>
<td>ts’</td>
<td>c’</td>
<td>k’</td>
<td>q’</td>
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<tr>
<td>glottalized</td>
<td>[ʔ]</td>
<td>[ʔ]</td>
<td>[ʔ]</td>
<td>[ʔ]</td>
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<tr>
<td>voiced stops</td>
<td>b</td>
<td>g</td>
<td></td>
<td>dl</td>
<td>gl</td>
<td>gz</td>
<td>j</td>
<td>g</td>
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<td>affricates</td>
<td>[x]</td>
<td>tx</td>
<td>lx</td>
<td>!x</td>
<td>t [x]</td>
<td>[k]</td>
<td>[q]</td>
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<tr>
<td>uvular stops</td>
<td>[q]</td>
<td>[t]</td>
<td>[q]</td>
<td>!q</td>
<td>[t][q]</td>
<td>[k][x]</td>
<td>[q]</td>
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<tr>
<td>ejected uvulars</td>
<td>[q’]</td>
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<tr>
<td>aspirated uvular click</td>
<td>[q]h</td>
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<tr>
<td>ejective affricates</td>
<td>[x’]</td>
<td>[x’]</td>
<td>[x’]</td>
<td>[x’]</td>
<td>ts’</td>
<td>cx</td>
<td>k[’]</td>
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<td>nasals</td>
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<td>n!</td>
<td>n!</td>
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<td>fricatives</td>
<td>s</td>
<td>z</td>
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<td></td>
<td>x</td>
<td>h</td>
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<tr>
<td>lateral</td>
<td>[l]; [r]</td>
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</table>

The table provides the phoneme inventory of Gǀui and Gǁana and as such it is not a cross Khoisan table. From the table, it is evident that the four basic clicks [ǀ; ǃ; ǁ; ǂ] are present in all the language communities. However, from the vocabulary list, their incidence varies statistically. While these fundamental clicks are attested in all these languages, they do not necessarily appear in all cognates. The consonant system of these languages is fairly representative of Gǀui and Gǁana and can be comparable to other Khoisan languages such as Nama and, Khwe. A comparative word list of 150 words was collected to systematically check phonological reflexes that occurred among cognates. These were checked against Gǀui and became the basis for the phonetic and phonological study of the lexicon. The Gǀui provides the basis for a genetic and diachronic phonological analysis (Vossen, 1988; Güldemann & Vossen, 2000). Phonological changes or differences from Gǀui are important in the determination of the nature of the lexical units that are the subject of this study which will help make a case of click loss or otherwise. The comparative method validity has also been found useful for these languages by Traill & Vossen (1997: 26) who observed that the systematic manner of click loss could be identified through comparative data. The comparative approach has been necessary to make certain determinations on the nature of the lexicon. As Traill & Vossen (1997: 26) state, the systematic nature of click loss can only be identified through comparative data.
Table 2 below provides both the IPA and the Naro conventions.

### Table 2: IPA & Naro conventions

<table>
<thead>
<tr>
<th>IPA (symbol)</th>
<th>Name of the click</th>
<th>Naro convention</th>
</tr>
</thead>
<tbody>
<tr>
<td>ǀ</td>
<td>dental click</td>
<td>&quot;c&quot;</td>
</tr>
<tr>
<td>ǁ</td>
<td>lateral click</td>
<td>&quot;x&quot;</td>
</tr>
<tr>
<td>†</td>
<td>palatal click</td>
<td>&quot;tc&quot;</td>
</tr>
<tr>
<td>!</td>
<td>alveolar click</td>
<td>&quot;q&quot;</td>
</tr>
</tbody>
</table>

The most appealing solution to some of the Khoisan languages like Naro is to use the Nguni symbols for representing the clicks as indicated in Table 2. The advantage of this system as pointed out in Visser’s argument is that it is practical, and it can be typed out using the ordinary keyboard, and communities are reported to easily accept these (non-IPA) symbols. The Giui-Glana communities are found closer to the Naro and they are in the same district. These communities are aware that Naro is read in the bible, sung in hymn books, found in public information such as health documents, found in notice boards, etc and there are signs that this orthography is attractive to the Giui-Glana communities. This was attested to by Visser (1998) and the findings of the survey done by Prof Chebanne & Prof Mogara support this observation. From these sources, the Giui-Glana communities easily identify with the Naro orthography, and as such their harmonized orthography is proposed along this line. From the survey, it was clear that if there is a preference, the Giui-Glana would prefer the Naro convention because of the proximity and functionality in public spaces such as health messages, public information, etc. However, Naro has not been a school language and this orthography is not learned in a formal setup unless you are part of the D’kar community where the church has a role in public literacy activities.

5. **Survey on Khoisan orthographies**

Since there is little baseline data on how Khoisan language speakers perceive the writing of their languages, a national survey was undertaken by the author to ascertain how speakers practiced or not practiced writing in their languages (Report on Data on Orthography Collection, June 2022). There was also another survey on the feasibility of the introduction of local languages in education which reported that some Botswana language communities did not have community orthographies. The lack of community orthography meant that:

(a) Communities either have informal writing systems (orthography) that are not agreed upon;
(b) Languages have no writing, and members of the communities have no writing practice for any purpose.

When the language policy was agreed upon by the Botswana Government, it was recommended that all languages should be used in early primary school literacy as a medium of instruction. This work therefore follows those languages, and these are the following: the Giui and Glana in NewXade, !Xoon in Kgalagadi and Southern Ghanzi (Bere); the Ju’hoansi (or Kaukau) in Ghanzi (of Grootlaagte, Qaqa, Qangwa); the Ts’ixa (of Mababe); the Danisi (or Danisani) (of Gweta, Dzoroga); the Shua (of Nata); and the Cirecire (or TciRECTCIRe of Manxotae, Lepashe). These languages are spoken in areas where children do not know the existing school languages (Setswana and English). The main aim of the survey was therefore to check the language competency of the communities
involved, and to ascertain their writing aptitudes. They were asked to translate a list of sentences into their languages to observe their competence and experience with orthography. Afterward, a discussion was arranged to appreciate their challenges.

6. **Findings from the survey**

Khoisan language orthography has not benefited from the orthographic development that other languages have had through missionary and community organizations as the findings of Chebanne (2010) suggest. Some researchers have attempted to understand this situation, among them, Suagestad (2001) who argued that the domination by other ethnic groups and their subordination of the Khoisan language speakers resulted in the current situation. Illiteracy in one’s language is very high among the Khoisan language communities of Botswana such as the Gǀui-Gǁana. The Naro (spoken in D’Kar, West and East Hanahai, Ghanzi, Tsokatshaa, and Kule) writing system has a greater impact on the choice of writing other Khoisan languages of surrounding settlements (Grootlaagte Ju in Ghanzi, and Qaqa and Qangwa in Ngamiland). The main finding was that orthography was a big challenge, in that they could not readily make sense of how to write their languages. Importantly, they had no idea of how clicks could be represented and the Gǁana community was the worst. This challenge is critical as it will require linguistic work to identify a phonemic system of any language and its interface with a writing system. While linguistic work exists for some of the languages, the writing systems that use the IPA are deemed complicated by most speakers of the Gǀui and Gǁana communities. It is therefore important to fast-track their orthography development together with literacy material development so that there is an immediate demonstration of the use of a writing system.

7. **Khoisan Alphabetic Symbols for a Harmonized Orthography**

The concept of a harmonized orthography is taken from Chebanne 2015 and seeks to argue for an economic and all-inclusive provision of resources for under-researched Khoisan languages. However, these harmonized orthographies present challenges for some speech communities that already have orthographies and materials such as the Bibles, dictionaries, and literacy materials because they are already accustomed to those for the reasons that they are practical and not complicated. Harmonized orthographies are not politically driven by any political agency and therefore cannot be supported by any government initiative. Educationally, Botswana is still grappling with challenges of implementing Mother Tongue Education, and work on orthographies is not yet completed and as such harmonization of orthographies does not make sense in the present educational context of Botswana. Literacy in African Languages seems to be mainly driven by earlier works than by modern efforts. Modern works do not benefit from such initiatives because they do not produce community literature for public information. Linguistic texts by Nakagawa and others are not accessible to the Gǀui-Gǀana communities. Linguists also produce linguistic texts that are difficult to read by the communities as exemplified by Gǀui and Gǀana communities.

Khoisan sound systems are much more elaborate and complex (Miller et al., 2009; 2007; Heine & König 2008:34 -35) than other language groups. In that complexity, any orthography system will encounter difficulties in representing all the phonetic realizations of the clicks with their accompaniments (Traill, 1997; Nakagawa, 2006). Harmonization therefore is to make the Gǀui-Gǀana orthographies more practical to them. From a purely phonetic typological perspective, some
linguists conceptualized a Pan-Khoisan orthography that would present the same symbols for all sounds that are classified based on similar phonetic features (see Miller et al., 2007; 2009). The creation of IPA for click languages was one important development (see Ladefoged & Maddieson, 1996). Most of the current documentation uses these IPA symbols (see Collins et al., 2011). However, the IPA representation of symbols has been deemed impractical for literacy of a general functional writing system (Visser 1998; Kilian-Hatz 2003; Hunziker, 2008). The Dickens orthography (Dickens 1994, 2005, WIMSA 2001) uses click symbols suggested in IPA and proposes combinations of letters to cater to the complexity of Khoisan orthography. Essentially, only the click symbols remained IPA. While combinations of consonants can present a daunting challenge to literacy, it is the only possible way to account for the extensive inventory of sounds in most of these languages. Several criteria are used in combining consonants. The most important ones are 1) the elaboration and expansion of the functionality of Latin letter symbols to account for Khoisan symbols, including the use of non-sound symbols in Latin (ǃ, ǀ, ǁ, ǂ, ʘ, etc); 2) the minimization of diacritics to enhance the functionality and economy of writing in Khoisan languages, and 3) the elaboration and expansion of possibilities to account for phonetic and phonological distinctions that may be lost in conventional representations in the standard phonetics convention.

Dickens worked in literacy development with the Ju’hoansi community in Namibia for a long time (WIMSA, 2000). His orthographic experiences are interesting, in that they led him to conceptualize a more practical writing system for a Khoisan language. Some of the evident advantages are the minimization of diacritics, IPA symbols, and simplification of extraneous phonetic features (Namaseb, al. (2008). It is important to admit that Dickens’ graphic symbols may not meet with unanimity among all Khoisan language communities. However, it is crucial to appreciate that what is of interest is the practicality of this system’s use, as it eliminates diacritics. Also, not all Khoisan languages would require all these symbols. Consequently, it is important that Dickens’ symbols inventory can be considered as a pool from which Khoisan language orthographic symbols may be obtained. This is the basis for a Pan-Khoisan Orthography that is argued for in this paper.

The Harmonized Standard Orthography for Khoisan languages used the Roman alphabet together with IPA for clicks (Namaseb et al. (2008). The following examples are taken from Taa (or !Xoon):

(i) Click sounds symbols

| Dental click, produced with the tongue tip touching upper front teeth. |
| Lateral click, produced with the tongue blade touching the molar teeth. |
| Alveolar click, produced with the tip of the tongue making an alveolar plosive. |
| Retroflex click, produced with friction suction at the alveolar ridge. |
| Palatal click, produced by the back of the tongue making a palatal plosive. |
| Bilabial click, produced by lips sucking air into the mouth. Lower teeth may be used. |

(ii) Click accompaniments.

| Voicing:  | g| g|| g! g^ g!! |
| Aspiration | h| h| h h h!!h |
| Uvularization | x| x| x x x!!x |
| Ejection | !| !| !’ !’ !’ !’ |
| Glottalization | q| q| q q !q !q |
| Voiced glottalization | G| G| !G !G !G |
(iii) **Oral Vowels**

Five Roman alphabet vowels are used in writing:

Simple vowels: i e a o u

Double vowels ii ee aa oo uu

Nasal vowels in en an on un

Double nasal vowels iin een aan oon uun

Pharyngealized vowels ih eh ah oh uh

Ejectived vowels i’ e’ a’ o’ u’

Glottal vowels iqi eqe aqa oqo uqu

(iv) **Pharyngealised vowels**

aq as in !gaq (listen)
aq as in kaaqn (then)
oq as in !goq (heel)
oq as in djoqe (be happy)
oq as in toq (honey)

(v) **Glottalised Vowels**

a’a as in !gaah (eye)
o’o as in gooh (Adams apple)

(vi) **Nasal Vowels**

aan as in !xaan (nose); !han (arm)
iin as in ciin (liver)
uun as in shuun (cheek)

(vii) **Oral Diphthongs**

ae as in n|ae (man)
aï as in n|ai (fat); !nai (angry)
ao as in cao (teeth)
au as in !!au (kidney)
oa as in coa (chest)
oe as in |noe (run); |goe (zebra)
ua as in |’ua (put on)
ue as in |gue (cobra)
uï as in !qui (hair); ||ui (sister)

(viii) **Nasal Diphthongs**

oan as in g!oan (coal)
uin as in |huin (ear)
aun as in naun(hare)

Note that the final [ŋ] indicates a syllabic nasal consonant ŋ as in hiŋ (see)
Another note is that all these symbols will be supplemented by writing rules that consider the syntactic realities of the languages. However, as linguists have stated, Khoisan languages are lexically isolating and this facilitates writing rules (Chebanne, 2015; WIMSA, 2000).

8. **The challenge of the Phonetic versus Roman Alphabet**

Persisting debates among Khoisan community organizations suggest that infusing IPA into an orthography creates problems and challenges for Gǀui and Gǀana language communities who are still illiterate in their languages. Some researchers have since argued that the transferred literacy skills are readily facilitated by a non-IPA writing system (cf. Kamwendo et al., 2009; Chebanne, 2015). Gǀui and Gǀana are coming into the discussion of literacy development at the tail end of other language developments. Other languages have made choices on what orthography convention to use. Nama has maintained a Khoisan orthography, and Khwedam has also maintained the Khoisan conventions which are phonetic (WIMSA, 2000). Naro has adopted the Nguni orthographic convention which uses the Roman alphabet (Visser, 1998). The debate on the choice between the phonetic vs the Roman alphabet in writing Khoisan languages persists, and in the surveys undertaken by Chebanne and Mogara (2022), it was evident that speakers of Gǀui and Gǀana are torn between which conventions to adopt. In Visser (1998), the near-phonetic convention preferred by linguists rendered the writing of Khoisan languages problematic. The essential reason they gave was that the near-phonetic orthography was not practical as its phonetic symbols were not accessible on most computers and cellphones to afford ease of writing texts. Further, they argued that the use of the Roman alphabet made an easier switch to literacy in English and Setswana, the two languages that are the main school languages that also use the Roman alphabet.

The near-phonetic orthography as advocated for by the Working Group for Indigenous Languages in Southern Africa (WIMSA, 2000) argued that the Khoisan orthography represented by Nama established a common Khoisan literacy heritage. It discounted the reason of the practicality of the Roman alphabet and insisted that Khoisan orthography would bring about innovation in the development of computers and phones. They also argued that a common Khoisan orthography would bring about shared values a common identity and enhanced development of resources. Similarly, Chebanne (2015) argued that the common Khoisan identity was more important than a sectarian approach to orthography development. Khoisan communities feel valued and stronger when they are developed on similar considerations (Biesele, 2009).

The state of African languages orthography has preoccupied linguistics and language use planners such as the Centre for Advanced Studies of African Society (CASAS), who have contended that the rivalry between these orthographies has been self-serving endeavours and that the consequences have been divisive (Chebanne, 2015; Chebanne & Mathangwane, 2009; Prah, 2000, Chimhundu, 2005). For Khoisan languages, the development of orthographies has either been deficient in the main or pursued the direction of isolated dialectal forms that have no sufficient demographic numbers or vitality to impact the lives of speakers (Chebanne & Mogara, 2022). This situation has linguistically and developmentally weakened Khoisan languages by reducing their socio-linguistic influence in the communities where they are spoken (Chebanne, 2015; Batibo 1998, Chebanne 2007, Chebanne et al. 2003). The issue is no longer which symbols of the alphabet to use, but how practically Gǀui and Gǀana languages can be written; the vital questions being who should debate and lead the development of the writing systems of these languages and are there common resources that can facilitate their writing and expand their communicative horizons in the modern
multimedia landscape. Further, the argument of how these Khoisan languages should be written using the available Latin and IPA alphabet symbols is in order.

Debates on orthography development have provided the foundation for serious consideration of Pan-Khoisan orthography and linguistic development (cf. Chebanne & Mathangwane 2009). Where there are incongruities from past orthographic designs, linguists should boldly tackle the problem and guide users of such orthographies into better practices. CASAS has undertaken the harmonization given the lack of capacity that many of our Khoisan ethnic and linguistic communities have. Harmonized orthographies will surely facilitate literacy development for many of our Khoisan languages. Community mobilization and grassroots participation are fundamental in orthography development. This is important because it is not the refinement of the linguistic orthography that will make Khoisan language communities adopt it. As it is evident in Visser (1998), Khoisan speech communities have the right to ask why their languages are the only ones written with “strange” symbols that are not practical to use even with modern computers.

9. Orthography Strategies for Literacy

Language orthography is a vital part of the development of literacy (Ferguson 1962), and all efforts to develop orthographies should critically take this into account (Chebanne, 2015; WIMSA, 2000; Webb 1995). As Chebanne (2015) and Biesele (2009) have argued, the existence of a practical orthography must be vital for the codification and development of a language for literacy and cultural preservation. The cluster approach for the development of Gǀui and Gǁana as adopted in this paper allows for a harmonized development of orthography for these under-researched and under-developed languages. The reasons for arguing for a harmonized Gǀui and Gǁana orthography are as Chebanne (2015) presented for Khoisan common writing systems: 1) Gǀui and Gǁana share similar phonetic symbols that justify writing them together; 2) a harmonized Gǀui and Gǁana orthography would be resourceful in capacity-building to give an impetus to literacy development; 3) mutually intelligible Gǀui and Gǁana would be facilitated to share linguistic and literacy resources; 4) Gǀui and Gǁana would stand a better chance of resisting marginalization by other influential and neighbouring local languages such as Naro or Bantu. The strength of this approach is that when Gǀui and Gǁana people realize that their harmonized orthography does not endanger their ethnic identities, they will feel encouraged to advocate for their common socio-cultural and linguistic destiny. Also, a common Gǀui and Gǁana writing system would dispel the often misguided views that these languages are difficult to write or that their writing system is strange. Importantly, literacy and other folk materials that are crucial in codification such as folktales, transcribed oral histories, grammars, dictionaries, and development of literacy materials should facilitate the reading and writing of related Khoisan languages by speakers and also by researchers (Chebanne, 2015; Biesele, 1998; 2009). The following considerations are of strategic importance in a harmonized orthographic approach:

- **Common orthography**: one orthography is designed for all speakers of connected but distinct languages. They should accept that they need a common writing system, even if they may express different things with their written texts. No one language should be taken as dominating or superior.
- **Dialectal unification**: In this undertaking, languages under consideration are taken as variants of one language, and the orthography is designed on linguistic principles that create consensus. These principles of writing should demonstrate that these language
varieties belong together.

- Common language resources: developments such as dictionaries, primers, newspapers, and public information dissemination such as radios should endeavour to be inclusive and accommodate any variation that speakers may have in their day-to-day use of their spoken variety.
- Convergence: When language varieties are codified and standardized, subsequent development over a long period, brings them together and they eventually emerge as a common language.

For Gǀui and Gǁana, the processes presented here would constitute a common orthography. This approach can be extended to other related languages to create a language cluster orthography (Chebanne, 2015). For Khoisan languages, this is the most economical way to overcome their development challenge. As argued by Chebanne (2015) and Chebanne & Mogara (2022), such language development practice should not be designed to declare the death of language varieties. Participating languages can still be spoken, and writers can produce texts that have a certain dialectal touch, but the important thing is to observe common orthography principles (Chebanne, 2010; Chimhundu 2005, Chebanne et al. 2006). Once the Gǀui and Gǁana speakers can write their languages with facility, they can resourcefully produce materials that express or record their common cultural and linguistic resources and indigenous knowledge.

It is crucial to make this point that, what makes an orthography practical is its acceptance by all and the practice of it by all writers in the language cluster. Even if writers use different words, they can write those words using the same agreed symbols (letters) to represent similar sounds. However, orthography alone is not a panacea in language development; other works such as grammatical description also need to be undertaken. The codification of language entails establishing general logical rules that will be applied consistently in the description and writing of the languages that fall within a harmonized form. No language can seriously be standardized without codification. This point is emphasized in the research by various orthographers of African languages (Chebanne, 2015; Chimhundu 2005, Chebanne et al. 2006).

10. Conclusion

The discussion of the challenges of Gǀui and Gǁana orthography raise critical issues that call for concerted effort in community literacy revitalization. It calls for a realization that these two languages constitute linguistic variants that must have a common development at the level of orthography and materials writing. This approach is justified by the linguistic consideration for the harmonization cluster languages since the areas of variation can be managed at the levels of orthographic and grammar development. The implementation of literacy for local languages will form the basis for orthography practice. The arguments presented in this paper can succeed and be of consequence if: 1) Gǀui and Gǁana languages are harmonized from the onset; and 2) Gǀui and Gǁana develop common linguistic and cultural resources that will functionalize their literacies so that speakers realize their linguistics relationship. This approach will consolidate the utilization of these languages in functional domains of communication. Gǀui and Gǁana must go beyond competing orthography developments that will only minimize their use given their speakers’ diminishing population. The significant benefit will be accomplished when Gǀui and Gǁana make a concerted effort to avoid considering superficial differences as obstacles that deprive them of linguistic and cultural resources from their common history, language, and culture. Importantly, the
argument that the paper makes is that Gǀui and Gǁana should adopt a common orthographic convention for language and culture development. The argument is not to suppress either of the two languages but to economically provide them with a common and harmonized orthography for literacy development.

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