

Current Research in African Linguistics:

*Papers in Honor
of Oladele Awobuluyi*

Edited by

Ọlanikẹ Ọla Oriẹ, Johnson F. Ilọri
and Lenzemo Constantine Yuka

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**We pro-noun-ce his name
(for Ọladele Awobuluyi)**

Tosin Gbogi*

i

it was summer '37
in a place where
the lullabies of birds
overwhelmed guitar and song,
where hornbills hearkened to the call
of thrushes singing in rush
above streams that strolled gently
gently without a word to the king

*he met language in summer '37
when earth was kind to man
and man was kind to earth*

it was from the armpit of the hills
that the phonemes carried him
into a syllable of sounds,
and from there into
logarithms of words—
syntax of stones
which against each one another hit
and burst into utterances of light

*he met language at oke-agbe
where earth was kind to man
and man was kind to earth*

ii

the globe in his hands
the benevolent wind sailed him to
the shores of another sea
there where latin lay
snoring, waiting for its requiem and rites

in columbia he learnt
that before empires fall
languages die
and that for each word that withers
a generation of ignorance is born
into forgetting, into *orangutanguage*

iii

and so he returned
into the tell-tale sign of hope—
the vernacular freewheel of freedom
he returned
to the hills
where blues first sang his name
to the hills
where in the plenitude of rhymes
he learnt the poem
that's the first speech of god to man
he returned
saving land, salvaging language

today we pro-noun-ce his name
from limpopo to ilọrin

today we pro-noun-ce his name
from lusaka to lagos

today we pro-noun-ce his name
from brazzaville to ibadan—
addis ababa to akungba

*yes, we sing his name
in the tenor of timeless tunes*

*Tosin Gbogi is the author of the poetry book, *the tongues of a shattered s-k-y* (Ibadan: Blackgraphics, 2012). He also recently co-edited an anthology of new Nigerian poetry, *One Poem, Fifty Seasons* (Association of Nigerian Authors, Ondo State Chapter, 2013). Gbogi is a doctoral student in Interdisciplinary Linguistics at Tulane University, New Orleans, USA.

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CHAPTER THREE

ORTHOGRAPHICS AS A SCIENCE: THE GBEXOLOGICAL APPROACH*

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Orthographic issues have been mainly dealt with as technical rather than scientific issues. Thus, most linguistic schools do not integrate theoretical issues of orthography into the mainstream of their academic focus. Recently, however, the Linguistic Circle of Garonne has been developed around a linguistic school christened “gbexology”. As a theory, gbexology has integrated “orthographics” as one of the language sciences worth developing. The present study aims at showing and explaining how orthographics is a distinct science. It then brings out the axioms, principles and methodology that characterize it within the gbexological framework.

Les questions orthographiques ont souvent été traitées comme des questions plutôt techniques que scientifiques. Ainsi, la plupart des écoles linguistiques n'intègrent pas les questions théoriques de l'orthographe dans leurs préoccupations centrales. Toutefois, le Cercle Linguistique de Garonne s'est récemment construit autour d'une école baptisée « gbexologie ». En tant que théorie, la gbexologie intègre l'« orthographique » comme l'une des sciences du langage dignes d'investigation, et donc à approfondir. La présente étude essaie de montrer et d'expliquer en quoi l'orthographique est une science distincte; elle met en valeur les axiomes et les principes ainsi que la méthodologie qui la caractérisent dans le cadre de la gbexologie.

1. Introduction

Specialists of writing systems view the history of transcription as a slow transition from pictography to ideography, then from ideography to phonography. In the first case, the evolution takes place on the plane of the “content”, moving from the level of utterance to that of word. In the second case, everything takes place at the level of the word, by change of plane, the plane of expression being considered as more favorable than that of content to graphic symbolization. Broadly speaking, one distinguishes two degrees of phonographic representation: (i) the syllabic writing in which the unit of the “signifier” coincides with the syllable (as is the case in Japanese and in Arabic) and (ii) the alphabetic writing in which the unit of the “signifier” coincides with the minimal sound. One then notes the vowel (*alpha*) as well as the consonant (*beta*), as is the case in most currently written languages. It also happens that in the alphabetic system, the analysis isolates a characteristic of the sound, as is the case with the representation of nasal vowels in French. Although the syllabic writing system based on Arabic, and called *ajami*, has been used to write certain African languages (*Ki-Swahili*, *Hausa*, *Fulfulde* and *Yoruba*, for instance), most of those written today use the alphabetic system, perhaps because of the high number of vowels in these languages. In the present study, we take for granted the suitability of the Roman alphabetic system and we review the three traditional conceptions of orthography (section 1) before arguing for the pan-dialectal or “gbexological” conception (section 2) with statements of specific principles (section 3).

2. Three conceptions of the alphabet based orthography

The issue of the standardization of writing systems for yet unwritten languages seems to have been approached from a monolithic point of view. From that viewpoint, the main theoretical concern is to know which level of linguistic description or analysis should sustain the orthography. Would the best orthography be phonetic based, phonemic based, or morpho-phonemic based? A literature review shows that these three positions have been held and practiced, all stemming however from two conceptions of the alphabet, namely the phonetic-based and the phonemic-based alphabets. The assumption here is that spellings can only use symbols already proposed for the alphabet of the language. We review here the three traditional conceptions of the alphabet based orthography.

2.1 *The phonetic based orthography and its weaknesses*

The most recurrent orthographic conception in Africa (although its promoters might not be always conscious of it) is the phonetic conception. It consists, broadly speaking, of the mechanical transcription of what is heard. We will have, for example:

<i>ʒvezalekɔl</i>	‘I go to school’ (French)
<i>mbɛɛ</i>	‘I looked for him/her’ (Fongbe)
<i>mɔ̀dálwɛ</i>	‘I helped her/him’ (Wacígbe)

This type of orthography could also be called *narrow transcription*. Its proponents call it *faithful transcription*. As for us we raise the following question: “faithful to what or to whom?” What we are aware of, in any case, is that this kind of transcription is not faithful to the language, as it may perhaps be faithful to the linguistic noise! Even then, it would be a loose faithfulness, as there are intonation and accentuation phenomena that are often attached to individuals, and are therefore idiosyncratic features. This explains why the strict form of this orthography is abandoned as soon as it must be applied to actual language practice. An amended conception of this type of orthography is still in practice, nonetheless. This type of transcription (called orthography) was favored by the first European missionaries for the following historical reasons:

- (i) They (the missionaries) were not always thoroughly trained as linguists. At most they were exposed to some phonetics before their posting to Africa. In addition, phonological theory was not firmly established before the 1930s.
- (ii) It was employed to write African languages before the missionaries had ample time to learn to speak those languages correctly.
- (iii) One should be able to identify and list the sounds of a language within no more than two weeks.
- (iv) One only needs to “learn once for all” that a given letter is pronounced in a given way everywhere it appears.
- (v) Finally, one may pronounce a sermon (in fact read it) in a language that one does not yet speak fluently.

One can already guess why we do not adhere to this orthographic conception. Indeed, far from being conceived as a tool in the hands of the speakers of the target language (despite all *a posteriori* justifications given), this orthography is first of all not only conceived for the foreigners, but it is especially conceived for the “correct reading”, without regard to

the proper understanding of what is read. Some people even dare pretend that this type of transcription is the easiest ever seen and the only one that takes into cognizance the native speakers. Of course, this assertion relies on a faulty knowledge of the peoples (who are deemed incapable of reflection and initiative) and on a wrong conception of ease (facility) that we shall take up later, while the third orthographic conception is being dealt with. All we need to say at this point is that the narrow transcription:

- (i) is individualist. Everyone transcribes the sounds that (s)he perceives in a subjective manner. Thus, instead of the French *ʒvezálekɔl* as cited earlier, we would also have *ʒvezálekɔl* or *ʒøvezálekɔl*.
- (ii) accentuates inter-dialectal differences. For example, for the utterance ‘(s)he heard it’ in Ewe, a Gbe lect of Ghana and Togo, one would have *ési* or *ésii* in one dialect (such as *Awlan*) and *ésee* or *ése* in another dialect (such as *Kpando*).
- (iii) in the final analysis, it can impede communication, which is an unfortunate outcome.

In fact, it is not at all an orthographic conception, inasmuch as the very idea of orthography exists. At this point we share Thimonnier’s (1967: 57) view when he writes:

Le concept d’”orthographe phonétique” manque de cohérence interne... On voit bien qu’elle devrait enregistrer toutes les formes de prononciation correctes et suivre de près leurs évolutions. La plupart des mots auraient donc plusieurs formes qu’il faudrait d’ailleurs périodiquement remettre à jour. On aboutirait ainsi à un système graphique sans unité ni stabilité.

In the end, those who advocate for a mechanical transcription as orthography are objectively against any orthographic convention, hence against the development of our languages. We may still excuse (and we must do it with respect) the errors of those brave pioneering missionaries, but we cannot afford to continue to tolerate the fact that some of us continue at present to perpetuate errors that we are well equipped to avoid.

2.2 The phonemic based orthography and its shortcomings

The second option, stemming from the choice of the phonemic based alphabet, is the phonemic conception of orthography. This conception must be taken seriously because it relies on the (at least implicit) acceptance of the idea of orthography as a system in which the written

symbols correspond to phonemes. The simplicity of this type of orthography lies on the bi-uniqueness principle that it puts into practice. In short, starting from what is said, one arrives at the correct spelling, and, starting from what is written, one arrives at the correct pronunciation, provided one is aware of the mechanisms involved. This principle is explicitly stated by Stewart (1966), to ensure a proper understanding of it:

(a) Si quelqu'un connaît les règles de prononciation, il peut lire avec la prononciation correcte, même s'il ne comprend pas ce qu'il lit; et (b) s'il connaît les règles de transcription, il peut écrire de façon correcte ce qu'il entend les gens dire, même s'il ne les comprend pas.

For instance, if one knows that, in the orthography of Wacigbe (a Gbe lect of Bénin and Togo) the letter 'l' is pronounced [r] after 't, d, c, j', then as soon as one sees *tló*, one would read [tró], and as soon as one hears [jró] one would write *jló*. This conception is thus superior to the first one because it takes into account certain automatism of the native speaker.

While designing orthographies for African languages, phonemic-based orthography was not favored by European missionaries. Although some of them were indeed aware of it, the automatism of their own languages was different from the automatism of the African languages. In other words, they would have had to learn "rules" that native speakers knew intuitively. In Wacigbe for instance (and this is also valid for other Gbe lects such as Gaingbe, Fongbe and Ajágbe), most consonants can be followed by nasal as well as oral vowels. For instance, words such as the following are attested: *ta* 'head' and *tan* 'history', *dá* 'be wicked' and *dán* 'ignore', and so on. When, after having taught a native Wací speaker some consonants such as 't, d, s, z, k, g' with the combinations of oral and nasal vowels, one then teaches him/her the consonant 'y' with oral vowels without any explanation concerning nasal vowels (especially if it were for lack of time), (s)he will surely, on his/her own initiative, write sequences like *yán*, *yín*, *yan* that (s)he will most naturally read as [á] 'to know', [í] 'to be' and [a] 'to wash (clothes)', whereas, in a faulty interpretation of the Beninoise national alphabet, some would insist on writing *nyá*, *nyí* and *nya* respectively. Such an automatism does not exist in French where one finds pairs such as *paille* [pay] and *pagne* [pa], *rayon* [reyõ] and *compagnon* [kõpaõ], etc. One may thus realize that the structures of French and those of Wacigbe are different. To correctly write Wacigbe, the French speaker must at this point learn a rule, while the Wací speaker acts by automatism. So far, the tendency of the phonetic based orthography has been to make a Wací speaker learn at least three rules, namely:

- articulating and recognizing the letters ‘y’ and ‘ny’;
- ‘y’, contrary to most consonants, is never followed by nasal vowels;
- ‘ny’ is only followed by nasal vowels; however, after nasal consonants, the ‘-n’ nasalizing the vowel is no longer marked.

One realizes that the facility or ease attributed to the amended phonetic conception of orthography is only a pretension, if not a fallacy, if one correctly defines the true users of the orthography.

The phonemic conception of orthography, as we have shown, is economical and pro-native speaker. It is also acceptable since an agreement is readily reached among native speakers on what is important and what is not. It is precisely this type of agreement that is the foundation of an orthography, as well as the very reason why the phonetic conception is anti-orthographic.

Despite its clear superiority over the phonetic-based orthography, the phonemic-based orthography may ignore certain important aspects of the language, namely the existence of “families of words” and the existence of dialectal varieties. This danger comes from the common interpretation of invariance, that is, “if a specific sound or a family of sounds are represented by a given symbol or letter, one must always represent them with such a symbol”. One may have noticed in Stewart’s (1966) formulation quoted above the statements “even if he does not understand what he hears” and “even if he does not understand what he writes”, where *he* refers to the one who practices the phonemic based orthography. One may also recall that one of the criticisms leveled against the phonetic based orthography is its lack of respect for a language’s ability to cling on to the “linguistic noise”. In this regard, the phonemic conception of orthography is close to the phonetic one. Let us take Fongbe once more as an example. This lect undoubtedly having the phoneme /ɛ/, it must have in its alphabet a grapheme to represent it, viz. ‘ɛ’. This enables us to have *vé* ‘be painful’, *lɛ kɔ* ‘turn back’, etc. By this reasoning, everywhere one finds the sound [ɛ], one would expect it to be represented by the grapheme ‘ɛ’; however, this practice is counter-intuitive for the Fon native speaker. To illustrate, let us consider the relationship between [kofi gbé avɔ́] > [é gbéɛ] ‘Koffi refused the wrapper, he refused it’ and [kofi gbá avɔ́] > [é gbéɛ] ‘Koffi has put on the wrapper, he has put it on’. Inasmuch as the two [é gbéɛ] are in fact different in Fon (even though there is no difference at the level of sounds), a good orthography should bring out the relationship of the first [gbéɛ] with /gbé/ ‘refuse’ (what is done), and of the second [gbéɛ] with /gbá/ ‘put on’ (what is not done), and favor in the reading the

shift from /gbá/ to [gbé] in the second case.

If this is not done – and the phonemic-based orthography does not do it often – the meaning (i.e., phonemic) relationship that exists between several terms may be lost. But what is a language if not a set of terms under different relations and a set of structures giving rise to an infinite number of utterances? What is facility if not the materialization of similarities and oppositions? It is on this basis that we make the claim that we need, for yet unwritten languages, to start with phonemic-based spellings, with the aim of necessarily correcting their weaknesses as soon as morphological data allow it. That is why we say with conviction that the alphabet is one thing and the spelling another. True enough, we continue to share the view that a word in a language must be written only with the letters of the alphabet employed to record that language, but we hurry to add that it may well happen that a given sound in a given word may not be rendered by the letter assigned to it in the alphabet, provided this reflects the automatism of the native speakers. This is part of the third orthographic conception that we shall now present.

2.3 *The morpho-phonemic based orthography*

The last alternative, that one cannot arrive at unless one has opted for a phonemic-based alphabet, is the one that we are calling here, perhaps inappropriately, *morpho-phonemic* or *conventional orthography*. It starts from the principle that a language is first and foremost a system of relations and that the most important units of the language are the meaning-bearing units (or the units of first articulation, according to Martinet 1968), units that should be the primary concern of the orthography, including the alphabetic orthography, as is the case here. That is why the morpho-phonemic-based approach implements the principle of minimal alternation or “policy of roots” concretized by the graphic image, or what, very imaginatively, others call “the face of the word/le visage du mot”. The major difference between this conception and the first two is that fluctuations observed in the oral system, inasmuch as they follow regular patterns, are not included in the spellings. Let us give some quick illustrations:

1. Let a Wací speaker be taught that in Wacígbe the third person singular object pronoun is *-i*, and let us give him/her the following utterances:

<i>áko Kofi</i> ‘he laughed at Kofi’	<i>á dā agblā</i> ‘he farmed’
<i>ási ami</i> ‘he passed on pomade’	<i>ā bú ga</i> ‘he lost money’
<i>áda gbōma</i> ‘he plugged vegetable’	<i>á sē gbāmá</i> ‘he understands that language’

Let us now ask him/her to render into written Wacígbe ‘he laughed at him’, ‘he cultivated it’, ‘he passed it on’, ‘he lost it’, ‘he plugged it’, and ‘he understands it’. The field experience that we have shows that (s)he will not be far from writing *é koi*, *é dei*, *é sii*, *é búi*, *é dai*, and *é sei* respectively by simply replacing object noun complements with the object pronoun (s)he has been taught. If we now ask him/her to read the utterances that (s)he has written, (s)he will most naturally read what, in the name of the national beninoise alphabet, some people would write as *é kwi*, *é di* or *é dii*, *é si* or *é sii*, *é bwi*, *é de* or *é dē* and *é si* or *é sii* respectively. Indeed, for the Wací speaker, it is normal that ‘o’, ‘ó’, and ‘u’, in contact with postponed ‘i’, are pronounced as ‘w’. Why is this? (S)he will not be able to say because it is an automatism for him/her. It is also an automatism for him/her that *ei* be pronounced [ii] or [i], which is why the phonetic sequence [é si] will have three different spellings according to whether it means ‘(s)he heard it, (s)he passed it on’ or ‘(s)he cut it’. Similarly – and this also applies to Gain, Fon, Ajá and Gun speakers, among others – every ai sequence will be pronounced [ɛ] for him/her. This is why (s)he will write something like *é dai* for ‘he plugged it’.

2. For a Twi speaker from Ghana, to whom it has been taught that the third person singular subject pronoun is *ɔ-* and that negation is expressed with the prefixation of *m-*, it is quite natural to spell ‘(s)he does not come’ as *ɔmba*, even though (s)he pronounces it as [ɔmma], because (s)he makes the link with the root *ba* ‘to come’. (S)he is most at ease making the link precisely because of the existence in Twi of the root *ma* ‘to give’, from which (s)he will make *ɔmma* ‘(s)he does not give’, which is homophonous with ‘(s)he does not come’. There is thus a difference between the concept of homophony and that of homonymy or homography.

For those who oppose this orthographic conception, two objections are leveled: that this type of orthography seems to be too abstract and that it would possibly be too analytic for the average person to be able to practice it easily.

The second objection is a more serious objection because it asks a fundamental question: for whom is the orthography conceived? Our

unambiguous answer is that the orthography of a given language must be conceived for the native speaker populations of that language or that they should at least be the target of said conception, for a variety of other people will also practice it. We must also add at this point that the notions of abstraction, ease, rigor, analytic character, and the like must all be defined from the point of view of the native speaker populations of the given language, those “grands absents du discours théorique et pratique alphabétique et orthographique de l’Afrique”, to use a very appropriate expression taken from Oyelaran and Yaï (1975). Who then are the population masses when one talks of a language? We certainly do not mean the bilinguals or the élite à la Pike (1947), because those ones derive some of their privileges from their use of the “official” language. They are rather the native speakers who, the vast majority of which, are not yet writing European languages and who by implication are marginalized in the management of public affairs. These are that multitude of very intelligent people who are masters at the level of oral practice in their respective languages, the mechanisms of which they have internalized, those people who are patiently waiting for, or, in most cases, vigorously fighting for, liberation from illiteracy so that they can participate most actively, most consciously and with “esprit de suite” in the building up of their country. So what? Well, it becomes obvious that it is the population masses that clamor for a morpho-phonemic type of orthography because, from their point of view, it is the simplest and most faithful, and hence the most practical, system of transcription. Whether it is called “analytical transcription” or not, the native speaker of Fon definitely insists on finding the “visage” $xɔ$ of ‘buy’ everywhere, even in $é xɔɛ$ or, better yet, $é xɔi$ ‘(s)he bought it’, so that one would not confuse this utterance with $é xwɛ$ ‘(s)he kept quiet’. The Asante speaker in Ghana insists on spelling $ɔɛ a$ ‘if (s)he divulges’ with $sɛ$, although (s)he pronounces it as $[ɔsaa]$, not to be confused with the homophonous $ɔsa a$ ‘if s/he dances’, using the root sa , etc.

When raising the issue of abstraction, one uses all sorts of rationalizations. For instance, we were once asked what the Wací peasant would write if he were dictated the utterance $[é si]$. Well, it is obvious that the phonic sequence $[é si]$ is not Wací unless it conveys meaning for the Wací speaker. It means that the spelling of $[é si]$ will depend on the context, and we have witnessed situations in which a peasant was asking “which $[si]$?” because it was an utterance issued out of context. This proves that the Wací peasant will write the $[si]$ that suits the meaning that he has understood, either sei ‘heard it’, sii ‘passed it on’, or still si ‘cut it’. Based on these examples, we see that the type of abstraction raised as a

weakness of the morpho-phonemic based orthography, the discrepancy observed between the spoken and the written forms (in terms of phonetic correspondences), is in fact a necessity of desabstraction. It appears that the type of abstraction observed is not gratuitous. Additionally, it should be made clear that if it is true that from the spoken form, one does not automatically and mechanically arrive at the correct spelling (one needs to understand the message), it remains true that from the written form, given the internalized “reading rules”, one arrives necessarily at the right pronunciation. This is also a very important principle that our languages, rather young from the point of view of written tradition, must adopt.

The morpho-phonemic based orthography is the type of orthography that should be truly encouraged. It has several distinct advantages:

- (i) It clears up useless confusion stemming from the mechanical transcription of spoken utterances. It is useful to point out here that “context” is always more evident in face-to-face interaction than in a situation in which the sender is not physically present. Many indices that enable the disambiguation of utterances are no longer at the disposal of the reader, which is why recourse to context is often a fallacy when one of the poles is passive.
- (ii) It ensures maximum agreement between users of the same language. A Gain speaker who says [n d’agblè] and another one who says [m de agble] for ‘I have farmed’ will both write *mu de agble*. In such a case, the first one recognizes that his flow is rapid and refers to other utterances such as *é dena agble* ‘he used to farm’ and *agbledetó* ‘the farmer’, etc.
- (iii) It “dis-isolates” the language vis-à-vis its immediate neighbors; that is, it allows in practice the pulling together of related languages. For instance, when the Wací speaker writes his [jró] ‘to wish’ as *jló*, he clearly comes close to the Fon speaker who says [jló] and writes *jló*. The Fon speaker who says [é kwè] for ‘(s)he laughed at him/her’ and the Ajá speaker who says [é kwi] for the same utterance will independently of each other write *é koi* and will realize eventually that they undoubtedly speak variants of the same language. The Twi speaker who says [ɔmma] and the Fante speaker who says [ɔmba] for ‘he does not come’ will both write, independently, *ɔmba*. It would then be revealed that the Twi and Fante “languages” are indeed dialects of the same language, namely Akan. This last aspect is not the least important. These languages clearly show that the morpho-phonemic based orthography acknowledges that a language is, in general, a group of

speech forms (or a dialect continuum, dialect complex or dialect chain) and that orthography will precisely help to demarcate through the harmonization and the leveling out of superficial differences (notably of pronunciation). Furthermore, the morpho-phonemic approach lays on not just a phonemic-based alphabet as we have seen above, but on a diaphonemic type of alphabet.

- (iv) Finally, being neither a dialect nor an idiolect orthography, the morpho-phonemic based orthography resists rapid change over time, for the state of a language on the time axis is to the language itself what a dialect is to a language on the geographical axis.

If we want to make yet unwritten languages objects for development, if we want to make them powerful, the only way open to us is to proceed to their standardization by proposing morpho-phonemic based orthographies, despite their demands.

3. Orthographics within the gbexology framework

3.1 Towards elaborating a theory

Although language sciences in the classical departments of Linguistics are expanding from traditional concepts such as philology and grammar to new ones such as stylistics, pragmatics, discourse analysis, and traductics/traductology, there is a tendency to marginalize Applied Linguistics (excepting language instruction). It is at the cost of great effort that these areas are now being considered worthy of investigation. It is in the course of this struggle that reflections on orthography and orthographics are being progressively established as a language science.

Being at the forefront of such a struggle (see bibliography), we have been led to conceive a school of linguistics through the Linguistic Circle of Garome. This school, christened “gbexology”, holds that science and society maintain a dialectic relationship, and it does not hide its anchorage in history (see Capo and Bada 1998, Capo 2000a). Grounded on the axiom that any language is a dialect continuum, gbexology aims at establishing the exact degree of relationship between lects. Its logical outworking is the specification of operational boundaries between related languages and their dialects. Its major contribution is to provide sufficient information on which to base efforts to improve on the unsatisfactory patterns which exist at present. Its practical utility is to provide a framework by which a comprehensive orthographic standard can be developed for dialects of the same language, leading to the gradual evolution of a variety superposed on

the dialect cluster. From this statement it becomes obvious then that gbexology incorporates orthographics.

In fact, gbexology holds that orthographics is a distinct language science, which draws upon - but must not be confused with - phonology, morphology, syntax and lexicology, traditional levels of analysis in descriptive linguistics, coupled with in-depth sociolinguistic and pedagogical investigations. It is thus not just a technique but indeed a science with theoretical rigor, a global view, epistemological considerations and dialectics, and specific methods. It has several components, among which are: reflection on the functions of the orthography of a specific language, given its contexts (sociolinguistic considerations); the identification of the units to be provided with graphemes (phonological issues); the choice of graphemes (sociological and pedagogical considerations); and the evolving of spelling rules, especially defining word boundaries (morphology, syntax and teaching considerations). As a school, gbexology has its own label or distinctive paradigm derived from the Gbe International Laboratory and the Linguistic Circle of Garome (see Capo and Bada 1995, Capo 2000a), in conjunction with the International Institute for Research and Training (see Fantodji 1999, 2000). This general orientation translates here as political choices.

3.2 Political choices

Far from pretending a hypocritical neutrality of science, linguists that are elaborating on gbexology share some political convictions, some of which are briefly mentioned here with respect to African languages.

- (i) Every speech community wants its “language” to be written down, for not only is it an expression of and vehicle for cultural values, but it also transmits knowledge of various kinds. Students of gbexology stand to satisfy such a demand, whether the lect involved is technically a language or a dialect of a language.
- (ii) Imperialist circles readily concede that indigenous (African) languages are part of the cultural heritage of their speakers, but they always insist that they are too numerous and lack the ability to convey modern knowledge. Gbexologists claim that the latest scientific information can be transmitted through any language (hence African languages) and work towards the standardization of various dialects of the same language through well-thought-out orthographic conventions.

- (iii) Some people advocate that African languages must conform to the way former colonial languages are written. Scholars embracing gbexology resist this prescription and hold that each language must have its own orthographic conventions based on the internal structures of that language.
- (iv) It is usually said that an orthography must first be accepted by the elite minority of the community, i.e. those already literate in the former colonial language. Students of language working within the gbexology framework take a stand in favor of the large masses, native speakers of African languages, who are prepared to foster/favor the sharing and circulation of knowledge.

These initial choices are reflected in the labeling of the functions that an efficient orthography must assume, especially in an African context.

3.3 Functions of an efficient orthography

- (i) *Unifying and demarcating functions.* Each language being defined as a group of highly related dialects, an efficient orthographic system will reflect the “unity” of these dialects through its pan-dialectal character and demarcate them from dialects of another language.
- (ii) *Emancipation function.* Since many languages are common to two or more nations with different colonial pasts, an efficient orthography of one such language will not be molded along the conventions of one colonial language or the other, rather it will be based on the internal structures of the language itself and enable the latter to be emancipated.
- (iii) *Integrative function.* Taking into account the multilingual/multicultural nature of many African countries, the orthography of a given language will be harmonized, as much as possible, with orthographies of the neighboring languages, through the use of identical or at least similar graphemes, for instance.
- (iv) *Normalizing function.* Making a conceptual difference between notation/transcription and orthography, an efficient orthography will represent language with graphic symbols, following some normative rules.
- (v) *Stabilizing function.* Based on a relative autonomy between spoken and written forms, an efficient orthography will avoid faithfully following frequent fluctuations in the oral register, a written register having its own internal logic.

- (vi) *Perennizing function*. Since language is not simply a cultural manifestation of a people, but more importantly an instrument to transmit knowledge towards the dynamic development of society, an efficient orthography will allow access to the past and open up horizons for the future.
- (vii) *Enhancing progress*. Since it is through language that one acquires new knowledge and expresses new findings or discoveries, an efficient orthography will favor intellectualization by making allowance for the incorporation of a rich and varied metalanguage, when necessary, through lexical borrowings.

To assume these functions, an efficient orthography must have definite characteristics, among which four are enumerated below.

2.4. Characteristics of an efficient orthography

- (i) *Uses graphemes that are easy to reproduce and discriminate*. But “by whom?”, one may ask. Of course our answer is that those for whom graphemes must be easy to reproduce and to discriminate are first of all the vast majority of the speakers of the language, not just or even primarily those who are already literate in the former colonial language (and have different language habits).
- (ii) *Resorbs predictable pronunciation differences*. What this implies is for the orthographer to take into account the automatically internalized phonological rules applied by native speakers, language behaviors that are unconscious but have psychological reality, so that the orthography follows the underlying phonological representation.
- (iii) *Saves the graphic image of a word*. Beyond accurate pronunciation, it is the transmission and understanding of the message that is most important in language, and, for an efficient orthography to translate that, it is desirable that the same “signified” always have the same “signifier”, as much as possible.
- (iv) *Preserves the very idea of a language*, while allowing individual dialects to be mirrored in it. It would be aberrant to repress speakers of a dialect based solely on the peculiarities of their lect. These should, on the contrary, enrich the “common language”, provided that, through the orthographic system, any word or expression looks natural or potential, in case the reader has never come across it previously.

These characteristics translate as the application of certain principles enumerated below. For practical illustrations with the Gbe cluster, see Capo (2000b).

4. The main orthographic principles

We distinguish principles relating to the identification and choice of graphemes on the one hand and those relating to spelling conventions on the other.

4.1 *With regard to graphemes*

We distinguish between principles relating to the identification of graphemic units and those relating to the actual graphemes.

4.1.1 Relating to the identification of graphemic units

- (i) *Phonemic principle*. According to this principle, a phoneme (seen as a family of related speech sounds which are functionally identical) must be assigned only one grapheme; it means that predictable and free variants of a phoneme must not, in principle, be graphically distinct.
- (ii) *Staphonemic principle*. A staphoneme is defined as a phoneme occurring in all dialects with the same description and in regular correspondence. According to the staphonemic principle, to a staphoneme is assigned one grapheme (regardless of how many realizations the staphoneme has in any specific lect).
- (iii) *Equiphonemic principle*. An equiphoneme is defined as a set of dialect-specific phonemes in regular correspondence. According to the equiphonemic principle, to all members of an equiphoneme must be assigned only one grapheme.
- (iv) *Neophonemic principle*. A neophoneme is defined as a set of different dialect phonemes in regular correspondence, such that one dialect's phoneme may also belong to another set of correspondences (a staphoneme or an equiphoneme). According to the neophonemic principle, to all members of a neophoneme must be assigned only one grapheme.
- (v) *Adphonemic principle*. An adphoneme is defined as a phoneme peculiar to one dialect or a group of dialects, often acquired through "borrowing", without a systematic correspondent in other dialects. According to the adphonemic principle, a distinct

grapheme must be assigned to an adphoneme.

4.1.2 Relating to the actual graphemes

- (i) *Principle of maximum differentiation.* According to this principle, two graphemes must be as distinct as possible in order to avoid confusion due to misrepresentation.
- (ii) *Principle of transparency or convertibility.* According to this principle, should it happen that two diaphonemic units have the same phonemic value in one specific lect, it is desirable that one of them be a digraph incorporating single graphemes to which they correspond in specific lects.

4.2 With regard to spellings

Here we distinguish between principles relating to correct spellings and those relating to morphological leveling.

4.2.1 Relating to correct spellings

- (i) *Principle of minimal alternation.* According to this principle, a stem or an affix must remain as stable as possible, without differentiating graphically morphophonemic alternates or phonologically conditioned (allo-)morphs. Consequently, phonological processes such as predictable assimilation, elision and others may not be reflected in the orthography.
- (ii) *Principle of maximal differentiation.* According to this principle, if, for two different semantic units, one dialect has only one phonological shape while another has two slightly different shapes, the orthography should be molded on the latter. Consequently, items that are homophonous in one dialect but non-homophonous in another lect may be written differently.
- (iii) *Principle of economy.* According to this principle, if some elements enter into a two-way contrast, it is recommended that only one be represented graphically. Consequently, redundant (always predictable) marks can be omitted from the orthography.
- (iv) *Principle of consistent analogy.* According to this principle, when a grammatical morpheme is clearly defined as a bound morpheme or a free morpheme following criteria internal to the language considered, all other grammatical morphemes with which it enters in a paradigmatic relationship will be written as words on their own

or as affixes (prefixes, suffixes, infixes, or supra fixes). Similarly, when a lexical morpheme is identified as a word or a radical/root, again following internal criteria, all other lexical morphemes with which it enters in a paradigmatic relationship will be written either as words on their own or as radicals/roots integrated to longer words. In other words, affixes and free morphemes should be identified; then terms that enter into the same paradigmatic relationship should have the same treatment.

4.2.2 Relating to morphological leveling

- (i) *Principle of maximal simplicity.* According to this principle, if, for a given morphological process, we have dialect-specific variants, the standard orthography will be based on the dialect in which the resulting form is the simplest and the most regular. Consequently, morphological processes that are different from one lect to the other may be regularized in the direction of maximal simplicity.
- (ii) *Principle of either minimal or maximal redundancy.* Redundancy being defined here as the duplication of grammatical information (e.g. concord/agreement, resumptive pronouns, etc.), according to the first statement of the principle, the standard orthography will follow the least redundant word arrangement, whereas, according to the second statement of the principle, the standard orthography will follow the most redundant word arrangement. In any given cluster, the choice depends on internal criteria.

5. Conclusion

The present paper has argued that orthographics may be established as a science. In actual fact, orthographic research is a real concern in Africa, given the present needs of African language development. One may object that “European languages” have a very long written tradition, yet the status of orthographic design has never been a major concern. I argue that this view rests on a partisan look at the linguistic research tradition of these languages. Even if it were the case, African countries are among the least advanced in the world, and their scientists have to confront the challenges of closing the gap. By working on “gbexology” as a theory, members of the Linguistic Circle of Garome wish only to contribute to this endeavor. At this time, when speakers of the so-called minority languages of Europe are fighting for the legalization of their languages, the gbexological approach to orthography may be brought to the attention

of language scientists all over the world. Professor Oladele Awobuluyi, through many of his publications, has prepared the grounds for the emergence of gbeology. As a teacher, a mentor, an external examiner of my Ph.D. dissertation at the University of Ghana, Legon, and later, as head of department and dean of faculty of Arts at the University of Ilorin, he has tremendously encouraged our research undertakings. Honor to him.

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