

Making dictionaries serve translation

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Abstract

John Roberts has lamented the tendency of Bible translators to ignore lexicography until after a New Testament has been completed and printed. The consequence is that while the translation process necessarily reveals much of the lexical richness of a language, few dictionaries are ever finished and little of the effort of creating such a dictionary ends up benefitting the translation itself. It does tend to be a peculiar minority of people who attack the task of lexicography with relish, but I want to outline the many ways that a working dictionary can and should support better writing. Recent developments have eroded many of the difficulties which have hindered the development and use of dictionaries. There is no need to typeset a full dictionary before it is used; software-based dictionaries can be useful even when incomplete. Rather than throwing knowledge away, every translator or pioneer writer should see the dictionary as a place to store the riches of their language and conserve the fruit of their wrestling with the language. Mother-tongue translators need dictionaries too. Where a diverse range of community members contribute their knowledge of the language to make a good, growing, living dictionary it can provide consultants, reviewers and translators alike with a wider evidence base for their decisions than mere individual opinion. I survey recent developments that make dictionary development more achievable than ever before, and propose procedures for Bible translators to use and maintain a dictionary with examples from projects that have done this.

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1 Introduction

“What a fine mess you’ve got us into.” (Parrott 1930)

None of the translators I have worked with in Nigeria have known what a difficult task they were letting themselves in for when they first expressed an interest in translating the Bible for their people. What seemed like a relatively simple task (pick up an English Bible, write what it says in our words) rapidly becomes more and more complex. Some are disheartened and others increasingly gripped as they discover the differences between languages, the challenges of translating anything and the particular difficulties all language pioneers face. Although in multilingual societies people are ‘translating’ every day, there’s admittedly a lot of muddle in that communication as people stumble over the mismatches between languages. Written translation (as opposed to immediate oral interpretation) gives us a great opportunity to take time to anticipate problems and to get it right. Unfortunately so much of the time I’ve found translation teams going round and round in circles while increasingly desperate to see progress. Why is this so common? What solace is there? What could we do better?

New strategies, methods, software and training have been suggested,¹ but few translators and consultants really expect a dictionary to be much help. Indeed, while in times past missionary linguists would often labour to produce a dictionary, grammar and translation of the scriptures,² for a variety of reasons dictionaries are no longer routinely produced except possibly as an afterthought once the whole Bible has been ‘finished’. This is unfortunate, not merely for ideological reasons but for profoundly practical ones. We would do well to remember how dictionaries contributed to past Bible translation efforts and consider how (mother-tongue) translators might build them to help in current methodologies of Bible translation.

John Roberts has written a helpful case study of how linguistic study informed the Amele translation (Roberts 2013). Building on this and my own observations, I contend that many problems and inefficiencies faced by Bible translation projects could be addressed by producing and using some kind of dictionary throughout the lifetime of the project.

- I begin by analysing some of the key difficulties present in translation (and checking), with a focus on issues where some kind of dictionary could help.
- Then I examine what kinds of writing support translators need, examining what features of dictionary entries might be most helpful for translators and what common mistakes people make in the construction and application of dictionaries.
- Putting this theory into practical shape, I propose some low-cost, high return ways that translators can begin with the tools they already use (eg Paratext) to start building a useful dictionary, gradually growing into a more sophisticated effort, but always with a focus on investment and immediate return.

1 cf BT2013 and other recent papers on accelerating Bible translation, such as Mark Gaddis, *Expediting Bible Translation*, 2013.

2 cf the 18th, 19th and early 20th century translations in Africa, such as mentioned in (‘Robert Moffat (missionary)’ 2015) and (Moffat 1869, 42).

- Finally we return to some of the dangers and discouragements that we need to avoid in this enterprise.

My own lexicography and translation experience

I must confess to being one of those strange people who loves reading dictionaries, loves discovering and using new words, delights in groan-inducing wordplay and is frequently caught in the cross-fire between clarity and circumlocution, mired in mixed metaphors. I spent nearly a year collaborating on the C'Lela dictionary in NW Nigeria in 2001 which cured me of any lingering prescriptivist leanings and inspired me to switch my focus from software engineering to Bible translation. Subsequently I have taught dictionary making and computers in linguistics at the Theological College of Northern Nigeria and have taken a keen interest in rapid word collection and software such as WeSay that enables people to collaborate in lexicography. (In 2001 I wrote my own collaboration system to support the C'Lela dictionary development and so I've been delighted to see others implement better systems.) Since 2011 I have worked as a translation consultant (in training) with several languages in central/northern Nigeria, with a particular focus on Gworog³ since 2013.

My focus in this paper is on support for undocumented, underdeveloped languages where it is likely that the only significant writing will be a translation of the Bible. It is possible that translators of fairly well developed languages and languages of wider communication (LWC) may be able to gain some insights and ideas, but in such cases I assume that others may already have worked on dictionaries for those languages. The challenge may be encouraging translators to use (and improve) the dictionaries that exist in a careful manner.

2 Analysis: Translation is difficult

While theoreticians and new students of translation regularly conclude that translation is impossible (Zweerde 2010, 266) the rest of the world relies on it happening all the time. How do we reconcile such a clash between theory and practice? It's helpful for translators and their associates to have some awareness of the common difficulties translators face so that we can examine what writing tools might be available to help.

Building a road while driving along it: translation and language development

Pioneering Bible translators⁴ are frequently doing two jobs at the same time: pioneering a standard written form of their hitherto unwritten language, and actually translating the Bible. Both tasks are formidable. A major pragmatic advantage of keeping everything oral⁵ is that we avoid the difficulties and confusions of doing both tasks at once. Likewise it is easy to wish that all the difficulties of language development and analysis could be neatly settled before translation begins. However, in many contexts the desire for Bible translation is the major driving force behind people developing their language and local

3 ISO639:3 KCG-Gworog.

4 In this paper I refer to as **pioneering Bible translators** people who are following the steps of John Wycliffe with the English Bible, being among the first to make a concerted effort to translate the Bible into their mother tongue and also amongst the first to put the common spoken language in written form to that end. Others may build on their work and improve upon it but every language and every translation needs a pioneer to blaze the first trail.

5 cf BT2013, BT2015 and other recent papers on oral Bible translation.

churches want to see practical, tangible results quickly. So it seems inevitable that in this generation of pioneering Bible translation, translators will be forced to wrestle with the difficulties of writing a language for the first time. How do we cope with developing the language whilst also using it in the translation? While translators naturally focus on the difficulties of understanding the original text and finding a suitable way of expressing the same meaning in their language, it is vital they recognise that many of their frustrations are actually due to the difficulty of an oral language giving birth to a written one.

For example, ‘team checking’ or review of a translation in a language that has not yet been well standardised will often descend into endless debates as to the best way to spell certain words. One person likes to divide words one way, and another person perceives it differently. Dialect differences cause contention. If translation teams can identify what are primarily language development issues, then they can deal with them appropriately and avoid running out of time to handle the real problems in translating ancient texts across cultures adequately — accurately, clearly and naturally.

Maintaining a dictionary is time-consuming, but if everyone uses it as framework for developing and recording consensus on language issues, it can be an immediate and enduring saver of time and relationships.

‘No Harry! Don’t look at the light!’⁶

Looking beyond the challenges of language development, most translators find it far too easy to be fixated by the form of the original, whether following the original’s grammatical patterns or discourse structure or falling for *faux amis* (‘False Friend’ 2015). A translator needs to refer to decent dictionaries for both languages to help remind themselves of the meaning both of the original words/phrases and the proposed translation.

In a similar way editors can find it hard to think of other ways of expressing things once they have been shown one way. A thesaurus (Glock 1976) or a dictionary with growing notes on normal usage – ideally based on a corpus of texts (Roberts 2013, 3,67) – can help editors to see other ways of expressing things which might be better.

Grappling with polysemy, semantic range and ambiguity

In every language some words are more flexible than others. While sometimes it is arguably unnecessary and impossible to distinguish polysemy and homonymy in lexicography (Bergenholtz and Agerbo 2015) it is certainly clear that a single word can have well-distinguished senses or meanings. The context, whether grammatical or lexical, must determine the meaning that writers intend and readers infer otherwise communication will be intolerably ambiguous. Word play (such as punning) may involve some abuse of this principle, misdirecting the hearer or reader before exposing the deception. Sometimes polysemy can be leveraged for rhetorical effect. Translators often face the challenge of mismatched polysemy: one source language word may have 3 senses but the target language requires different terms to express each sense. The reverse is also true; a translation equivalent might have more senses than the original word had.

A small example can illustrate the difficulties of finding appropriate matches cross-linguistically.

6 (Lasseter and Stanton 1998)

Example: πειραζω/πειρασμός in James 1

The Greek noun πειρασμός has two entries in BDAG (Bauer 2001, ‘πειρασμός’ p. 793), which could be glossed as ‘test/trial’ or ‘temptation’ (abbreviated by me):

1. an attempt to learn the nature or character of something, **test**, trial
2. an attempt to make one do something wrong, **temptation**, enticement to sin.

The related verb πειράζω has 4 senses described in BDAG (again abbreviated by me):

1. make an effort to do something, try, **attempt** (at times in a context indicating futility)
2. endeavour to **discover the nature or character** of something by testing, try, make trial of, put to the test
3. attempt to **entrap** through a process of inquiry, test
4. **entice to improper behaviour**,

James 1 appears to play on this polysemy, causing real difficulties for the translator:

² Πᾶσαν χαρὰν ἡγήσασθε, ἀδελφοί μου, ὅταν **πειρασμοῖς** περιπέσητε ποικίλοις,...

¹³ Μηδεὶς **πειραζόμενος** λεγέτω ὅτι ἀπὸ θεοῦ **πειράζομαι**. ὁ γὰρ θεὸς **ἀπείραστός** ἐστὶν κακῶν, **πειράζει** δὲ αὐτὸς οὐδένα. ¹⁴ ἕκαστος δὲ **πειράζεται** ὑπὸ τῆς ἰδίας ἐπιθυμίας ἐξελκόμενος καὶ δελεαζόμενος·

(‘Count it all joy, my brothers when you face **πειρασμοῖς** of various kinds... No-one who is tempted should say “I am **πειράζομαι** by God”; God is **ἀπείραστός** by evil, and he **πειράζει** no-one. But each is **πειράζεται** by his own desires, lured and enticed...’)

Exacerbating the problem for English translations, *test* and *tempt* have other senses beyond what is meant by πειρασμός as these (abbreviated) dictionary entries of the verbs illustrate (Stevenson 2014, ‘tempt’, ‘test’):

tempt: (v)

1. **entice or try to entice (someone) to do something that they find attractive but know to be wrong or unwise**
2. be tempted: have an urge or inclination to do something
3. persuade someone to do something
4. archaic: risk provoking a deity usually with undesirable consequences.

test: (v)

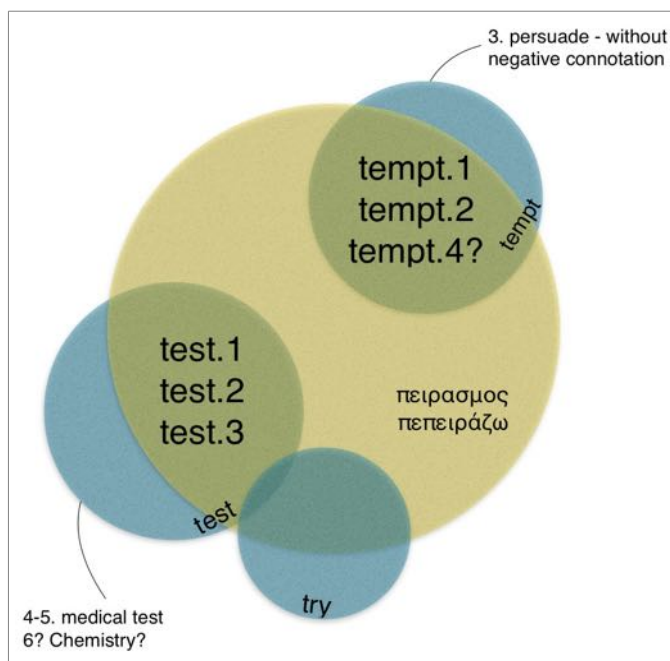
Generally: take measures to check the quality, performance or reliability of something

1. give someone a short examination of their proficiency or knowledge
2. judge or measure proficiency/knowledge by means of a test
3. **reveal the strengths or capabilities of someone/something...**
4. carry out a medical test
5. [with no object], produce a specified result in a medical test...
6. Chemistry: examine a substance by means of a reagent
7. touch or taste something to check it is acceptable before proceeding further.

The senses in **heavy** type are those I consider to correspond most appropriately to the apparent senses of *πειράζω/πειράσμος* in the original. Simply using either ‘test’ or ‘tempt’ concordantly to represent *πειράζω/πειράσμος* in James 1:2-14 will end up being internally inconsistent and incoherent.⁷ The list of senses and definitions helps to reveal the similarities and differences between the English and Greek terms in a way that otherwise might not be very clear.

A Venn diagram (see right) can roughly illustrate the semantic overlap and disjoints, where the semantic range is represented with partially overlapping circles. Some senses of ‘test’, ‘tempt’ (and also ‘try’) seem to lie within the range of senses of *πειράζω/πειράσμος*, but several do not, and there are also aspects of the Greek terms which are not conveyed by any of those English words.

A Greek-English dictionary helps us to identify English words that can express the meaning of *πειράζω/πειράσμος* and thus to internalise something of the way those Greek words describe reality. It is helpful to see the distinct senses for the words but this is not enough support for the translator. There are two benefits an English (target language) dictionary brings.



1. The English dictionary clearly shows no overlap between ‘test’ and ‘tempt’ and translators are forced to distinguish between the senses when translating *πειράζω/πειράσμος*. The term *κακῶν* ‘evil’ in James 1:13 clearly indicates in that context the ‘enticement to bad action’ sense is in view, rather than the sense of ‘learning the nature of something’.
2. It also reveals that these translation equivalents themselves carry various senses which are not part of *πειράζω/πειράσμος*. Having found an apparent match, the translator is often tempted to disregard the mismatches.⁸

Most current Bible translators have access to a dictionary explaining the Biblical Languages via English, yet no clear way of analysing and comparing the senses of similar words in their own languages. This presents us with a very real danger that translators using the Biblical languages will be skewed by the English (or other LWC) analysis undermining full and careful use of their own language resources.

⁷ I once unwittingly but memorably provided a similar example when speaking via interpreter in Tanzania, comparing and contrasting ‘grace’ and ‘mercy’. When the interpreter represented both as *reHEMA* the rhetoric was ruined and communication confused.

⁸ In the case above, given the context is clearly neither medicine or chemistry, I consider it unlikely that anyone would misunderstand ‘test’ but given the widespread use in English of a glib and non-negative form of ‘tempt’ to mean being persuaded or attracted to something (tempt.3) we may want to watch out for possible misunderstandings in that way.

Collocations

Since words do not normally exist in isolation, it is important to understand the normal patterns that govern their usage. Some phrases, such as ‘father and son’ and ‘bread and butter’ have a normal order or common words which collocate, or are often found together. Translating the component words individually may lead to a stilted translation. On the other hand, writers may deliberately break the usual order to surprise the reader, such as אִישׁ וְאָבִיו יָלְכוּ אֶל־הַנְּעָרָה ‘a man and his father...’ in Amos 2:7. If we represent an unnatural or marked collocation with an unmarked, or ordinary collocation, then we lose an aspect of the communication. So, as well as definitions, notes about normal usage and common collocations are helpful, both for source language dictionaries and target-language dictionaries.

The Collins COBUILD dictionaries (‘The History of COBUILD’ 2015) pioneered a corpus-driven approach to English language dictionaries for learners of English, showing the natural and common patterns of language use. A strong motivating factor was the realisation that a dictionary which treats words in isolation does the translator or the learner of a new language a disservice.

Idioms, usage

Idioms, in the sense of “a group of words established by usage as having a meaning not deducible from those of the individual words” (Stevenson 2014, ‘idiom’) cause translators problems (Barnwell 1986, 16) because idiom conventions vary between language. Since idioms are typically ‘brittle’ if one word is changed, the special meaning of the idiom will be lost on the listener. On the other hand, if a translation accidentally invokes an idiom where none is intended (such as Psalm 1 “stands in the way of sinners” or Deuteronomy 11:19 “...when you are walking by the way, and when you lie down...” [ESV]) it is distracting for the reader. Moving between languages the translator may forget the natural patterns of usage, and so need the support of a dictionary which notes idioms with their meanings.

Connotations & Associations

Just as idioms leverage conventional patterns to give special, particular meanings not deducible from their components, words in each language will have associations with other words and wider connotations which cannot be easily predicted. It is very helpful for the translator to be reminded about the negative, positive or other connotations and associations a word has, since this helps pre-empt unfortunate choices of words. For example, in English ‘woman’ used as a direct address as in John 2, seems unspeakably rude, particularly given the situation of Jesus addressing his own mother. To describe the word ‘woman’ without noting the cultural and emotive connotations of certain usage is unhelpful. When reviewers or hearers object to certain translations, sometimes it may be because of unfortunate associations.

Decision-making is tiring

Making decisions is a very tiring exercise (Tierney 2011) and the more considerations that need to be held in the balance mentally, the more exhausting. Translation involves many tricky decisions and while the very mentally agile may be able to carry out a good deal of translation without any external aid, the likelihood is that tired translators and consultants take short-cuts. The result may be unnaturally concordant translation, verbosity, a lack of clarity or a blindness to possible misunderstandings.

3 What kinds of writing support do translators need?

I recently was catching up with a translator⁹ who has struggled for some years to make progress translating the Bible. I asked him what he thought made the work hard and progress slow. To my surprise one of his first answers was the lack of any kind of dictionary of his language. He is not alone. John Roberts (Roberts 2013, 54,55,65) gives several examples where the Amele translators needed the support of a dictionary to properly understand the English source language and consider the best translation options available to them. Without the record of careful discussions, their mother tongue intuition alone was insufficient.

In some situations the translator is always surrounded by a community ready and willing to discuss language issues with them, but often this is not terribly easy. David Francis, the Nikyob translator, noted several lacks:

1. without a dictionary he found it hard to know the best ways of using the language (including coping with dialect variation),
2. without a standardised written form it's hard to write anything down and be confident of it being understood well,
3. when there is uncertainty about Biblical terms he is unsure whether he is capturing the meaning as it should be from the source,
4. similarly reviewers are at a loss to comment beyond giving their personal preferences about what the translation should be.

In short, without any writing support for the translators it seems the Nikyob translators were floundering and expending effort while making little real progress. Whenever they did make some progress, the underlying thinking and discussion was liable to be forgotten. And when experienced translators die without recording some of their accumulated knowledge in some useful form, they take with them to the grave the fruit of many difficult and necessary discussions.

Since languages of wider *communication* are frequently languages of wider *confusion*, it is very dangerous to assume that a translator is actually understanding what is really intended by the English versions they read, even when the translator relies extensively on English and appears to function well in it. In my experience in Nigeria, most people assume a one-to-one equivalence between words in different languages, with the semantic categories being laid down by the underlying mother tongue. In younger generations there has been more widespread but often more superficial education, with non-standard or idiosyncratic understandings of English being passed down from teacher to pupil. While a new Nigerian English may be emerging from this morass, in the interim it leaves translators often thinking they understand their reference materials better than they really do. So clearly some writing support needs to challenge writers' assumptions about the language of wider communication, whether highlighting the polysemy, semantic range, collocations or idioms, or even expressing the connotations of particular words.

9 September 2015. Conversation with David Francis, from the Nikyob community in Kaduna State, Nigeria.

As already described above, while the driving force for much language development may be the translation of the Bible, this means that translators are often the first people to seriously wrestle with spelling, word division, grammatical norms and dialect differences. The wise translator needs a good way of keeping track of every pertinent discovery so as not to be either overwhelmed or (more likely) to forget it and miss the opportunity to develop the language well.

However, for a variety of reasons, the kind of dictionaries most helpful for translators are seldom developed before or even during a Bible translation programme. We discuss below some of the reasons for this, then outline a number of ways in which a growing dictionary can benefit a Bible translation.

Why dictionaries are often ignored (making them and using them)

Dictionaries are certainly ignored in terms of production and use. There are some good reasons for this. Well formatted, printed, general-purpose dictionaries take an extraordinary long time to prepare and cost a lot to print; they are a risky endeavour. Few are the people, and somewhat peculiar, who genuinely love the tedium of exhaustive documentation especially when the most work may be exerted on obscure entries that quite possibly no-one will read. It is good to admit this.

Dictionaries undoubtedly can have many uses, but many preconceptions can undermine the practical utility of dictionaries. Some people envisage a dictionary as a status symbol for their language and in that case a terse word list would do without requiring anywhere near the time or money required for a full dictionary; it need not even be carefully checked if its purpose is just to sit on a shelf looking impressive.¹⁰ Beyond the status symbol, it is understandable but unfortunate that people often focus on the least imaginative uses of a dictionary and so given the effort required to produce such a work, consider it of little importance. Most mature readers would only turn to a dictionary when coming across esoteric, rare or technical words. Younger readers or readers of a foreign language will have much more cause to turn to a dictionary. Writers and editors may imagine the main use of a dictionary is to ensure correct spelling, especially when orthography has diverged from phonology to the extent of English. But if words are written as they sound then who needs a dictionary?

And then some entertaining souls ‘swallow a dictionary’ to impress their listeners, such as the honourable and notable Patrick Obahiagbon, a Nigerian Member of the House of Representatives:¹¹ *“Every word I use is in the dictionary but the only difference is that I use a multiplicity of dictionaries. My elliptic and polyvalent modus of communication has been something that I have acclimatised myself to for donkey-years and it would be unfair to me to say that it is just razzmatazz... This is my logomachy.”*

¹⁰ A well-intentioned translator once showed me his surprisingly large dictionary of a Nigerian language. It consisted of a standard English dictionary with his Nigerian language equivalents written beside the English headword. This too would take a modest time to complete and would yield an impressive looking tome with numerous senses and well-edited definitions but is undermined by being one of the most misleading and dangerous approaches to lexicography. In essence we had a word list masquerading as a dictionary. The definitions were only appropriate for the English headword,

¹¹ Quote from [youtube.com/watch?v=kBZn2pg2k78](https://www.youtube.com/watch?v=kBZn2pg2k78), see also [youtube.com/watch?v=OF0Re7gJBb8](https://www.youtube.com/watch?v=OF0Re7gJBb8)
[youtube.com/watch?v=96A4ZctoBdw](https://www.youtube.com/watch?v=96A4ZctoBdw)

Such behaviour is so markedly at odds with the ideals of clear and natural Bible translation that such (ab)use of dictionaries may give them a bad name. Most Bible translators (and consultants) are less interested in building a linguistic museum of curiosities than helping themselves and others wield the language well. The helpful lexicographer will identify obscure or technical words to help an honest user avoid unwitting abuse of the dictionary in this way. This is particularly important when we have jargon such as novel Biblical terms included in a dictionary which may be only understood well by a subset of the community.

A general purpose dictionary may be deadly dull, irrelevant to most users or may try illegitimately to fit the language into some 'ideal' pattern – perhaps following the language of wider communication. Searching through a dictionary may be intimidating and frustrating for highly inflectional languages or root-based languages such as Arabic and Hebrew. There are many reasons to ignore dictionaries and rely on mother tongue intuition and the mental dictionaries that everyone has.

Finally, the busy writer perhaps feels under too much time pressure to consult a work of reference. Or perhaps the dictionary is theoretically available but practically hard to access. We should not downplay the challenges of building and using dictionaries, but recognise that there are many ways to dodge the difficulties and benefit.

Spell checking

Checking spelling is one of the most frequently cited, yet least imaginative reasons for using a dictionary. There are two sides of spell-checking: discovering the canonical spelling and verifying spelling that the writer believes to be correct. Even experienced writers may be uncertain of the canonical spelling of a word – especially a rare or commonly-confused word – and so may want to look it up when drafting and proofing. Even experienced writers make typing errors to the annoyance or confusion of the reader; it is considerate to remove every such error that may hinder comprehension.

With paper dictionaries spell checking is a time-consuming process. Computers are usually much better than people at checking spelling, providing you supply them with all the correct rules. If there is no printed dictionary then the pioneering Bible translator has no authority to refer to and so spelling may never actually be checked.

Translators are often in a rush to just get something translated, but simply writing the way something sounds often turns out to be much harder than people expect. Sounds are used differently in different languages and often there are several reasonable-looking ways of dividing words and combining letters to convey the sounds as well as meaningful aspects such as vowel length, tone and intonation which won't necessarily have a self-evident representation.

A concern for consistent spelling and use of punctuation may chiefly have developed with printing technology, but it is genuinely helpful to give readers and advisors/consultants more certainty of what the translation is saying and make reading less arduous.

So automated spell checking and quick verification is a genuine purpose for target-language dictionaries, but there are some major discouragements, challenges and dangers we must avoid. These are noted in section

There is also much more that a dictionary can offer to the translator.

Glossary & Biblical terms

Technical writers are concerned about using technical terms correctly. The Bible is a technical work, with specialist vocabulary from many areas of life and incorporating concepts and terminology from different cultures.

Translators need to keep track of their standard ways of translating technical terms, to help ensure consistency and to save wasting time repeatedly wrestling to find a good translation. Many translation projects have kept a note of Key Biblical Terms, often with a 'back translation' into a language of wider communication, for the sake of consultants. Some translators produce a glossary to better help readers and new translators understand the Biblical concept being communicated. Both the list of key terms, functioning as a translation memory or reference list and the glossary are kinds of dictionaries and helpful in their own way, but they focus on the meaning of the biblical terms rather than the meaning of the translation 'equivalents'.

In searching for good translations of biblical and technical terms, the Bible translator may need to become an expert in many domains out of their immediate experience. He may need to research the terms used by blacksmiths, potters, builders, farmers and soldiers, amongst others.¹² A loyal translator-lexicographer will serve his community well by documenting and sharing all he learns; a dictionary should be a storehouse of a community's linguistic treasure.

However, alongside harvesting specialist jargon from their community, a translator who is keenly aware of his audience needs to document the less precise or less technical ways ordinary people may talk about specialised industries. If he documents and labels both the technical and the informal terms and senses in a dictionary then he provides a reference for reviewers to consult when they are ensuring that the translation communicates accurately and clearly to the target audience. A highly technical translation that ordinary people do not understand (without looking up a dictionary) may be impressive without being helpful.

Beyond mere glosses: definitions, grammatical notes, usage, idioms

Given the challenges of translation, a dictionary which is really useful for writers and translators must at a minimum move beyond glosses to definitions and indicate different senses of a word. As we have already seen we can in some places add extra value by giving grammatical and usage notes, identifying who understands the word(s), and listing idioms which use the headword.

A wordlist with simple glosses reinforces the mistaken notion of one-to-one correspondence between languages. However glosses are attractive because they efficiently get you very close to the meaning. The astute dictionary user knows that a simple one word gloss is misleading. I think a good compromise is to use both a gloss and a clarifying definition.

Some illustrative examples from Hebrew, English and Hausa

We already saw above that a uniform gloss of *πειραζω/πειρασμος* as 'tempt' or 'test' is misleading because both the Greek and English words have a variety of different senses.

12 cf. much biblical imagery, such as military: Ephesians 6:13ff; construction: Psalm 118:22; pottery: Isaiah 29:16, 41:25, 64:8, Jeremiah 18:4,6, Romans 9:21. See also Mark Sweeting's paper/poster **The Cornerstone: A Biblical Term of Foundational Significance** to be presented at BT2015.

However, even giving different glosses for different senses may still be misleading, because semantic boundaries are drawn differently, with some words being much more broad in one language than the gloss is in another language.

For example, we could gloss the Hebrew word יָד /yad/ as ‘hand’, but while English ‘hand’ means usually ‘the end part of a person's arm beyond the wrist, including the palm, fingers, and thumb’ (Stevenson 2014, ‘hand’) the Hebrew term has a much broader sense. So a more helpful entry in a Hebrew-English dictionary might read:

יָד noun:

1. hand, arm; the upper limb from shoulder to fingers, not just the palm and back of the hand as in English.

Then some extended or figurative senses would be helpfully listed, such as:

2. side, part...
3. strength...

Similarly a Hausa dictionary is misleading if it simply defines **hannu** as ‘hand’ (Bargery and Westermann 1951), since a better definition would likely resemble that of Hebrew יָד above, though with different extended/figurative senses:

1. hand, arm; the upper limb of a person from shoulder to fingers.
2. trunk (of an elephant)
3. sleeve (of a shirt)

In each case, the gloss does help the reader get a quick grasp of the sense of the word, but the definition shows clearly where the gloss falls short.

Again, instead of merely being satisfied with glossing עֵץ /ets/ as ‘tree’, we would serve the translator better if we made it clear how the word is actually used in Hebrew, and how the gloss may be misleading. English maintains a clear distinction between a living tree and (felled) logs/firewood/wood. Hausa has a term ‘itace’ which corresponds to עֵץ better than English, but in the secondary sense has some differences which are worth pointing out. So a Hebrew/English/Hausa references might resemble this:

Hebrew עֵץ

1. tree *Hausa*: itace-1;
a large plant with a strong central stem (trunk) that bears fruit or seed, larger than a vegetable plant
2. wood, timber *Hausa* itace-2;
but in the Bible cut wood in this sense is more often for building materials or sacrifice than just ordinary firewood.

The secondary sense for Hausa itace is generally wood for burning ('firewood') whereas it seems that the secondary sense for עץ is more likely to be wood for building ('timber').

Very common words like לֵב 'heart' and מָרָא 'bitter' are very easily misunderstood because the English words used as glosses differ markedly in their figurative and idiomatic senses, though the original or basic sense may correspond well. A dictionary entry for the Hebrew term לֵב should point out that it is not used figuratively about emotions (as English 'heart' is) but about decision-making. Similarly 'bitter' has a primary sense connected with taste, but the English figurative sense of 'bitter' implies holding a grudge against someone while the Hebrew figurative sense is more about intensity of suffering.

What might a translation-aware dictionary entry look like?

It should be clear that not every kind of dictionary will serve translation. Some example entries may give some ideas about what is helpful and what falls short.

From the 2001 C'Lela dictionary (Rikoto 2002) here are three main entries, chosen fairly arbitrarily:

dédgà v. (past *dedgka*)
 1) pack carefully. *lallaba*.
 2) make use of for a short time, meticulously care for sth so it does not spoil, tie slackly as a temporary measure. *taushe*.

dòkò² v. (past *dòkkò*)
 1) peck. *caccaga*, *tsattsaga*.
 2) choose someone to wrestle with, spar. *zaba*.
s'dwèklò an.
 continuous pecking. *caccaga koyaushé*. See: *dwéklé*.
dòkò³ n. (plural *c'dòkò*)
 biceps, large muscle round the arm just above the elbow. *kwadon hannu*, *kunduwa*.

The C'Lela dictionary – intended for print publication from the outset – began with a trilingual wordlist (C'Lela with English and Hausa glosses), gaining IPA pronunciations and example sentences later. In the editing phase, as duplicates were eliminated, the editors tried to understand the varying senses of words which seemed to have several possible glosses and uses. While the source material often began with a gloss, we realised that this was sometimes misleading, and so we sought to expand glosses such as 'pack' to distinguish related words.

Given that C'Lela grammar distinguishes nouns and verbs, we separated homonyms for **dòkò** from different senses of **dòkò²**, based on the part of speech. The entry for the noun **dòkò³** gave both the more technical term 'biceps' but also a non-technical description.

With the benefit of hindsight and with electronic publishing for translators in view, there are several deficiencies:

1. There were no example sentences because the example sentences in the source material were not sufficiently illustrative and spelling and grammar checking all of the example sentences in the database took too long.
2. The entries lack any semantic domain marking, or explicit links to related words which might be helpful for translators. The English reverse finder list did at least

group together other words for ‘pack’ etc, but direct links to related words would be much better, to enable translators to consider better alternatives.

3. The lengthy secondary sense for **dedga** appears to be somewhat contradictory, perhaps suggesting more senses that need disambiguation and illustration.

In the Gworog WeSay dictionary, I added the following entry during translation checking:

jyam verb

- **Definition:** roam; wander around aimlessly
- **Glosses:** roam, wander
- **Note:** DR: September 2015 team discussed whether this was appropriate for 'prowl' in 1 Peter 5:8 but decided that there "wurug əkhə" was more appropriate.

In section 4 I will go on to explain how translators and consultants can work towards making similar entries as they discuss words in the translation. Eventually this minimal entry could be expanded, but for now it records something useful we have discovered about the word, even though it was eventually deemed inappropriate for the translation of 1 Peter. It would be good to identify whether it can be used equally for animals and humans, but that distinction may not be relevant for the Bible translation.

An example dictionary specifically designed for Bible translators

The UBS ‘Flora and Fauna of the Bible’ (UBS 1980) is so richly descriptive as to border on being an encyclopedia. It supplies a good model for translator-friendly dictionaries in anticipating misunderstandings or misconceptions people may bring to each term. So the ‘Translation’ section for סִנְיָ ‘bush’ includes this warning, particularly pertinent to Nigeria:

Unfortunately, many languages do not have a generic word for bush or shrub; they only have “tree” and “grass.” In West African English the word “bush” refers to an uninhabited wilderness area. Every year people “burn the bush,” and in a number of places translators have mistakenly used this concept in their translations of this passage and in Deuteronomy 33:16 where “him that dwelt in the bush” is particularly confusing to many West Africans. In the absence of a word for “shrub,” it may be necessary to use “tree.”

Such a pattern could be helpfully followed for target language dictionaries.

4 Suggested ways forward

The busy Bible translator, advisor or consultant can very easily be overwhelmed with all the ‘best practice’ advice which is available. We may be tempted to ignore it all or be totally distracted spending endless time trying to come to grips with every new idea. But instead I would like to present a gradual way forward that aims to add as little cost (in time) as possible for maximum immediate gain. The more elaborate the system we try to adopt, the greater the risk that it will all be a monumental waste of time and effort.

There are already some relatively simple tools within the grasp of most Bible translators and assistants. Since most Bible translators I work with have access to the joint UBS/SIL Paratext software, I will concentrate on that and on free software tools. (Obviously

without Paratext some steps would be different, but very similar results can be achieved using standard free software.)

Overview

Paratext's Biblical terms tool gives a simple structure for building a useful dictionary, though with some significant limitations we should not ignore. It is a good way to start accounting for polysemy and with the glossary tool (from Paratext 7.5 and later) it provides a good area to practice writing definitions in the style of a monolingual dictionary. Since all information is shared via Send/Receive this is an easy way for translators and advisors to build their knowledge of the language as it applies to biblical terms.

The Wordlist tool allows us to approve correct spellings, then check the spelling of existing translation and new drafting. This is helpful, but has limitations and some dangers if the orthography is still unstable.

The Project interlinearizer (File menu) keeps a basic lexicon of glosses to refine its guesswork about what the translated words mean. Often different glosses will reflect different senses of a word.

Finally, Paratext is being increasingly integrated with FieldWorks. Any user can look up a word from Paratext in the FieldWorks lexicon, building and refining the dictionary entry in FieldWorks, with all of the distinct senses and notes that anyone has added.

Paratext Biblical Terms

As already mentioned, many translators of technical writing find it helpful to keep a reference of technical terms and past translations.¹³ Paratext's **Biblical Terms tool** is a very good way to start developing a useful dictionary, gaining some immediate benefit and practising techniques which can then be used for the language in general. There are three possible tasks associated with each Biblical Term:

1. Listing valid translation options (taking account of polysemy of source and target language).
2. Verifying that the actual translation uses the agreed renderings appropriately.
3. Building a glossary to help readers of the translation.

Begin with names, for simplicity's sake

Select the **Major Biblical Terms** list¹⁴, limit the range of terms to just one book and then focus on the names. The names are the easiest place to start and the major decision you need to make is about the spelling/transliteration of each name.¹⁵ This is a translation policy decision which the translation committee or team need to agree on and document at some point in a translation brief. The options are generally to begin either with the Greek/Hebrew, or with a language of wider communication, then adjust in some ways to

¹³ See 'translation memory' products such as www.wordfast.com/clients_translators etc

¹⁴ **Major Biblical Terms** is a hand-picked list of biblical terms drawn from a number of sources. There are arguably many omissions, but it's a good place to start.

¹⁵ If quite a lot of translation has already been drafted then you can **Guess Renderings** to get Paratext to make an educated guess about how the names are being spelled in the translation. In this case the renderings will be added in red. It's probably best to do this for names only rather than other kinds of biblical term as the guesswork becomes increasingly fraught with difficulty for more flexible terms.

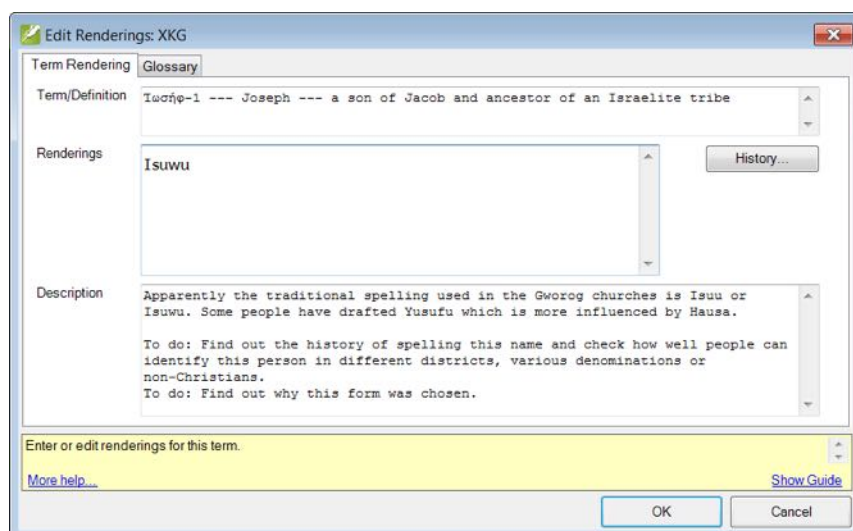
suit the phonology of the target language. So what kind of information do we need to record about these names?

1. The **spelling** of the name.
2. A note about the **source** and the **basis** for the spelling.
3. Optionally:
 1. some glossary information to help readers understand anything which is significant about the meaning of the name or the identities of the people with this name.
 2. a list of common mistakes in spelling the name, or old standards.
 3. discussion about other options for spelling the name which are under consideration, but not currently standard.

Within the Biblical Terms tool we double-click on a row to open the editing window. Enter the standard transliteration in the **Rendering** field. Then I recommend putting additional information in the **Notes**¹⁶ field. Many translators concentrate only on the first item, recording the spelling of the name, but if we start to build more information about the entry we can prevent confusion and wasted time later on.

The most basic information to add in the **Notes** for a name is the rationale for the transliteration, such as ‘following Hausa’ or ‘following English’, or possibly explaining a phonological constraint.

To give an example, churches have been established in Gworog-speaking lands in central Nigeria for nearly a century but the formal Bible translation project is quite new. They apparently have an established history of rendering the name ‘Joseph’ as *Isuwu*. This is unlike both Hausa and English, the languages of wider communication. Given that the normal translation policy was to follow the familiar Hausa forms, I was surprised at the rendering and asked about it. Then, in the notes field I added this explanation together with anything that I was uncertain of:



¹⁶ ‘Notes’ may be titled ‘Description’ from Paratext version 7.6.

Of course such information should also be in a consultant report, but by adding it to the Biblical Terms tool it is more obviously available to any other consultant, advisor, theological student or new translator who does not know the reason for the rendering.

Going further

Once you have established a pattern giving the rendering and an explanation in the notes you can start working on more complex terms that have multiple senses, such as κύριος 'lord'. The Greek term has several senses which will not necessarily correspond directly to the target language. The Good News and NIV use the following renderings: **lord, Lord, sir, master** since the English terms have a narrower semantic range than the Greek. That is English uses different words to convey the appropriate meaning in context.

In Paratext 7.5 or earlier, different renderings are separated by commas, but from 7.6 you enter each on a new line. Paratext conveniently allows you to type a note or gloss in (brackets) afterwards. So in Gworog we might have the display as below:

Making the most of notes/description

The **Notes** area of the biblical term window is a freeform area to describe the term. The lack of structure makes it simpler in some ways, but to make the most of the tool it may be best for a translation team to develop a standard pattern for the description, possibly along these lines:

1. Definitions.
2. Mismatches or concerns about the rendering(s)
3. Misspellings
4. Alternatives – either rejected or under consideration

If we place a gloss for each biblical term in (brackets) following it, then in the notes box we should add a fuller definition, making clear the significance of the different senses.

This is a good place to identify semantic mismatches or possible misunderstandings. Considering the examples outlined earlier, it is very unlikely that any rendering will be an exact match for the original term. If we understand where our rendering falls short and how it may be misunderstood, then we can more easily check that it does still function satisfactorily in context.

Misspellings are bound to occur in the future, and if we clearly identify them now then we can save time wondering what the correct spelling is.

Finally it is often necessary to consider several possible renderings. As a translator builds an entry in Biblical Terms it would be wise to consider other terms that may seem similar, and to account for the inevitable mismatches between the semantics of the biblical term and the standard renderings.

If we only ever mention the current standard then no-one reading the entry knows whether an alternative has been considered. When a rendering has been found to be unhelpful and has been replaced by another rendering, we should explain the differences between all of the alternatives. This may help prevent regression¹⁷ to a less satisfactory term. Comparing and contrasting similar terms in the target language is a necessary part of the process of finding the most appropriate standard translation.

Sometimes a translator may think of a new rendering which seems superior to the current agreed standard. In a team project, it would be inappropriate for a single team member to change the rendering without discussion, but to avoid losing the insight, the translator could add the proposal to the **Notes** box.

However, the **Notes** box is perhaps a clumsy place to try to store too much information. Eventually it would be good to document the words used in the renderings so that you approach the translation from the other angle, just as we saw with the test/tempt/πειρασμος example from James 1 earlier. Translators or other advisors may create dictionary entries (say in a WeSay or FieldWorks dictionary) for all of the candidate renderings, their component words and related words.

Making use of History

Paratext 7.5 and later prompt¹⁸ the user to explain any change in the Biblical Terms rendering through the **History** button. This can warn a team away from chasing their tail, unwittingly changing back and forth between alternative renderings. It's a suitable place to note briefly the motivation for a particular change. Later anyone can look at the record to understand what changes were made in the past, whether wise or not.¹⁹ This can complement a comment in the **Note** field that explains why the agreed rendering should be used instead of anything else.

Glossary entries

Paratext 7.4 and later includes a very helpful **Glossary** tab in the Biblical terms tool. Glossaries are really specialised mini-dictionaries which focus on explaining terms used in the Bible which may be unfamiliar to or misunderstood by some readers. While the

¹⁷ Regression in software engineering describes the surprisingly common situation of old errors recurring after having been apparently fixed.

¹⁸ with a flashing exclamation mark sign

¹⁹ This kind of chronological, change-focussed record-keeping is very helpful in the software development world where it is equally possible to go round and round in circles, especially in a team environment.

information in the Notes box should usually be written in a language of wider communication, so that all translators, advisors and consultants have access to the information, the glossary entries should be written in the same target language as the translation.

Somewhat confusingly the glossary is really a kind of a mono-lingual dictionary or encyclopedia rather than simply a list of glosses. So if translators think of a dictionary as a word list, they may be uncertain how to write a glossary entry, and may be tempted simply to translate something from a resource. This would be a major mistake.

Glossary entries can compensate for the mismatches between the source and target languages, helping the reader to avoid drawing any unhelpful inferences due to differences in culture and semantics. For this reason the entries should probably contain some negative statements.

Caution: some drawbacks

We need to remember throughout that the Biblical Terms tool is organised according to the original source language terms. Because semantic range, polysemy and usage vary between languages we must keep reminding ourselves that you cannot ‘reverse’ a bilingual dictionary and end up with anything useful. The Biblical Terms tool is really a dictionary of Hebrew/Greek with glosses and definitions in the translation language.

Paratext Spell checking

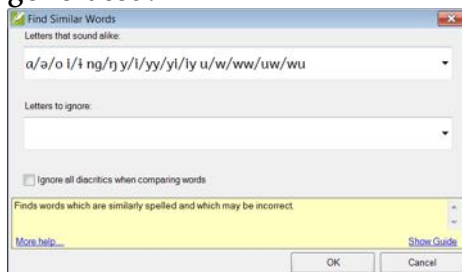
Paratext keeps a **Wordlist**,²⁰ all the words actually used in a translation, so that you can mark each spelling as correct or wrong. Once you have enough words marked good or bad (rather than the default of unknown) then Paratext adds a bit of statistical guesswork and offers two different kinds of automated spell check: step-by-step or wiggly underlines. This is clearly the best way to satisfy the need for consistent spelling and picking up typing errors, but using these tools well is much harder for pioneering Bible translators than many people expect. We will save the pitfalls to avoid for the next section, but concentrate here on what I consider a prudent way of working through the word list and then transitioning to spell checking.

First we need to assess how stable the orthography seems to be. Apart from just reading through the translated text, Paratext’s Wordlist has several ways of identifying instability in the writing system.

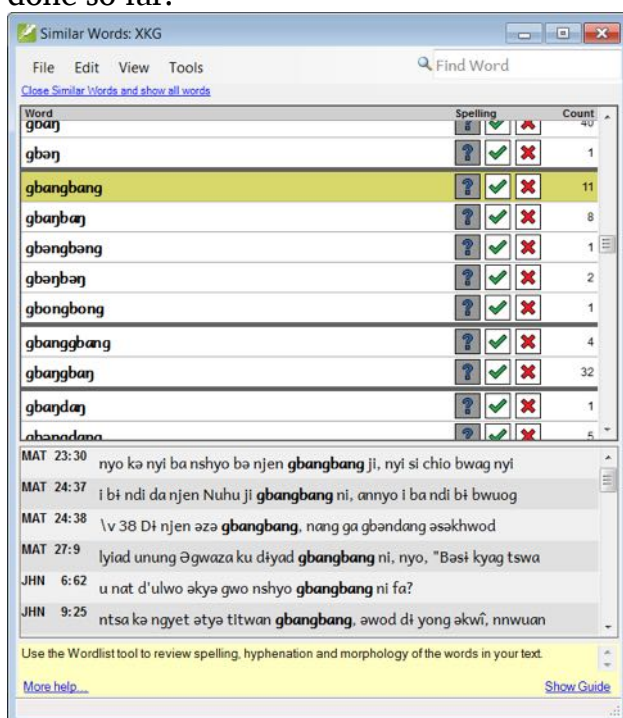
- Start with the mistakes that translators and checkers can identify, then ask ‘What general problem might be underlying these specific mistakes?’
 - For example, if there are more vowel symbols in the target language (eg ə ε ï ɔ) than in the languages of wider communication (LWC), then people may forget to use them.
 - Is there a ‘transition primer’ to help people transition into literacy from a LWC? That may give a clue about likely mistakes. If there is no such guide then the team need to make one.
- Use the Word Lists’s **Similar Words** tool to get a sense for the scale of difficulties.

20 In the **Tools** menu

- For example, in Gworog several vowels are commonly confused and other special characters are not used consistently.
- If we use the settings as below, then a long list of potentially confused words is generated:

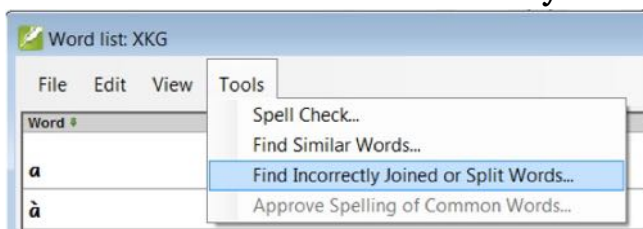


- Then we need to work out which are erroneous. Out of context it can be very difficult to know what these words actually mean, so clicking on each word in turn shows in the panel below where the words occurs in the translation work done so far.

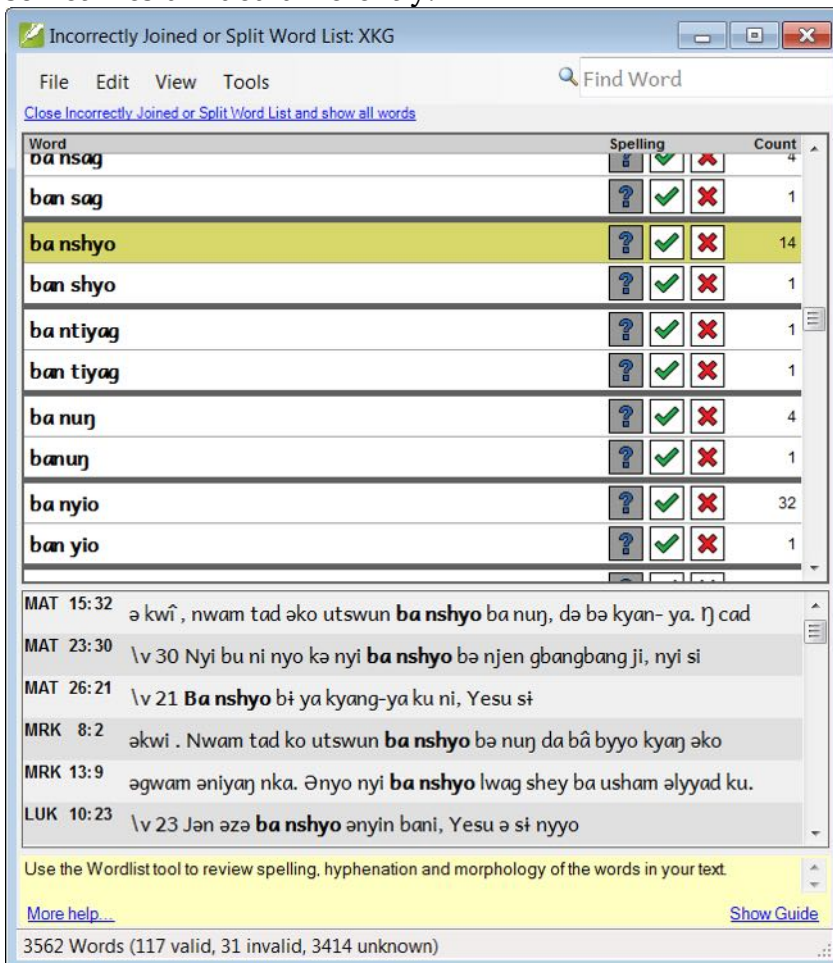


- This can help us to understand the variation. In the example above, we can see the signs of an orthography change; the /ŋ/ symbol was adopted instead of /ng/ but because it would be dangerous to replace all /ng/ with /ŋ/ there are still many words with the old spelling.
- Are words divided chaotically?

- Use the Wordlist tool **Find Incorrectly Joined or Split Words**.



- This will group together words which all contain the same letters but are sometimes divided differently.



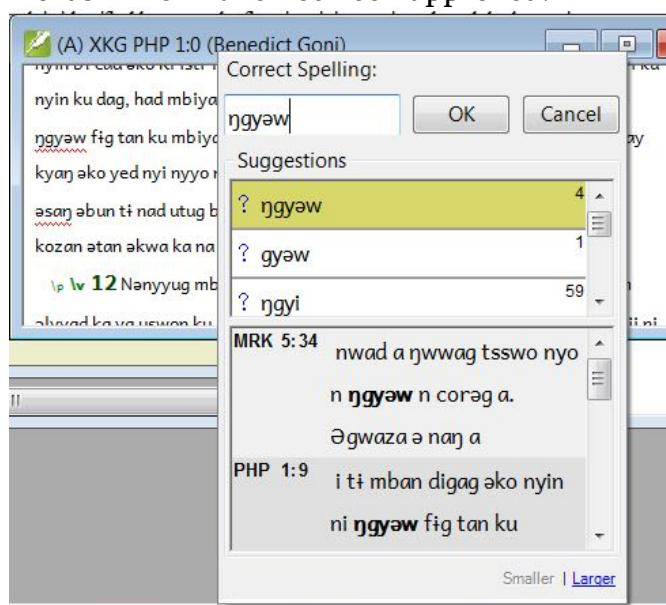
- In the example above, we can see that an initial /n/ sometimes is written on the preposition /ba/ 'in' because of phrase level phonological rules. 'ba nshyo' and 'ban shyo' differ only in word division.

Pedantic non-native speakers (such as translation advisors or consultants) may be much better than native speakers at identifying inconsistency. If the orthography is as fluid as the Gworog currently is, hasty automated spell checking will be of little help, probably will cause damage and certainly will waste considerable time.

If the orthography is still quite young I would recommend that the team checks spelling as a team and only approves the easy, obvious words first, and only where there is clear consensus.

When the orthography has stabilised then:

- Work through all of the words in the wordlist either correct or wrong (and supply the correction).
 - Note: It may be more encouraging and manageable to do this for only one book of the Bible at a time. Use the **Wordlist** → **View** → **Set Scripture Range** command to do this.
- Then, having clicked on the project window, turn on the **Checking** → **Display Spelling** option.
 - In the drafting window, Paratext will add red (and grey) wiggly underlines to words which have not been approved.



- Right-click on such a ‘questionable’ word in order to change the spelling to a similar word, or mark the spelling as OK.
- Clearly this only makes sense if there are very clear guidelines for deciding what the canonical spelling is. If it is just a matter of opinion and preference then this tool will waste time. While this can be done individually, it is important to ensure that every individual is implementing consensus decisions about spelling.

Spell checking in other software

If you have developed an extensive list of approved words in Paratext, it is possible to transform that list and use it with other software such as LibreOffice²¹ and Microsoft Office. It is also possible to produce a spell checking list from WeSay or another dictionary to use in Word Processing and layout software apart from Paratext, whether

²¹ **Tools** → **Spelling and Grammar...** → **Options...** → **New...** to create a new dictionary then look in **Tools** → **Options** (or on a Mac look in **LibreOffice** → **Preferences...**) and look at the LibreOffice **Paths** section to find where the dictionary files are stored. They are just plain UTF-8 text files with a list of correctly-spelled words sorted in alphabetical order. You can move the approved words from Paratext by opening the Wordlist and exporting as XML, then massaging the words into a plain text file.

through a series of manual conversions of the dictionary file or by writing software to do it automatically. But unfortunately there is not space or time to describe the process here.

Interlinearizer

Paratext's Project Interlinearizer (opened from the File menu) begins with statistical guesswork to generate guesses of the meaning of words in a translation based on a reference text. (Sometimes the results are astonishingly good and other times, as you would expect, they are nonsense.) As you teach the interlinearizer correct glosses it uses them in the future in place of the guesses. Helpfully, you can also supply both a phrase level and morpheme level translation. Paratext displays all the glosses for a particular word when you click on the current gloss.

Complementing the work done in the Biblical Terms tool, the interlinearizer can help us work towards a bilingual dictionary of the target language as we build a bilingual word list. We should expect a mismatch in semantic range and senses between the translation language and the glossing language which will likely give us an opportunity to account for different senses of the target language words.

For example the Gworog **əlyyad** has the basic sense of 'word' and an extended sense of 'issues'. Quite likely the word **əlyyad** will have a variety of other uses which are not yet accounted for in the interlinearizer. Note also all the red 'guesses', which generally are irrelevant. The Gworog pronoun **nyin** also appears to have a variety of glosses: 'your.pl', 'you.pl' and 'yours.pl'. This is not because of polysemy so much as grammatical differences with English. It is not the form of the pronoun but the word order that determines whether it is in a possessive relationship with other words. (Since Gworog distinguishes between second person singular and plural, to avoid confusion I have made the plural explicit in the gloss, hence 'you.pl'. The gloss 'you' should really be replaced by 'you.pl'.)

nyin	əlyyad
your.pl	words Enter
☒ your.pl	☒ issues x
☒ you.pl	☒ word x
☒ yours.pl	☒ words x
☒ i	hear
☒ you	of
will	god
tell	this
your	in
tell you	that

This is not because of polysemy so much as grammatical differences with English. It is not the form of the pronoun but the word order that determines whether it is in a possessive relationship with other words. (Since Gworog distinguishes between second person singular and plural, to avoid confusion I have made the plural explicit in the gloss, hence 'you.pl'. The gloss 'you' should really be replaced by 'you.pl'.)

Help in finding ambiguous homographs, wrong words or misspellings

Gworog uses tone extensively to mark lexical and grammatical distinctions but the Latin-based writing system is still developing and given that the Latin alphabetic is not very suitable for marking such distinctions we have quite a number of tone-differentiated ambiguous homographs. Several other sound distinctions are not being differentiated in writing reliably yet so this leads to other situations where the wrong spelling is used. The interlinearizer can help reveal these occurrences because it deals purely with the orthographic form of the text.

For example in two occurrences shown below, the word **nnay** (long initial consonant) is properly the number 4. However, it may be wrongly written as **nay** which instead means 'request'. When glossing, the error should be obvious. (My convention is to prefix the gloss of each misspelled word with *.)



Idioms and figurative language

A lively translation will endeavour to use idioms in the target language where appropriate and following the usual patterns of the language. However idioms can pose problems during checking because the literal meaning of the individual words is at odds with the combined meaning of the idiom. It will help translators and consultants if we capture both the meanings of the constituent words and the actual message conveyed by the whole idiom. Record the real meaning of idioms by linking together the constituent words to gloss it as a phrase. It may help to identify such entries by a prefix such as “**idiom:**”. (Later, if we migrate the interlinear lexicon to WeSay or FieldWorks, then we can search for such prefixes on phrases and figure out how to expand the entry most helpfully.)

Similarly, if we have a word glossed as ‘seed’ in the text it may be helpful to identify the actual plain meaning at the phrase level as ‘descendent’. Alternatively, add a gloss marked with a prefix such as “**fig:**”, ie. “fig:descendent”.

Moving interlinearizer data into other software to develop a richer dictionary

The list of translations (most likely glosses) is stored in the project folder, inside the **Lexicon.xml** file. As a translation consultant I have found it helpful to browse the gloss list interactively.²² Others have wondered whether they could move these data into WeSay or FieldWorks. This is possible but it is not without its problems. A simplistic method is:

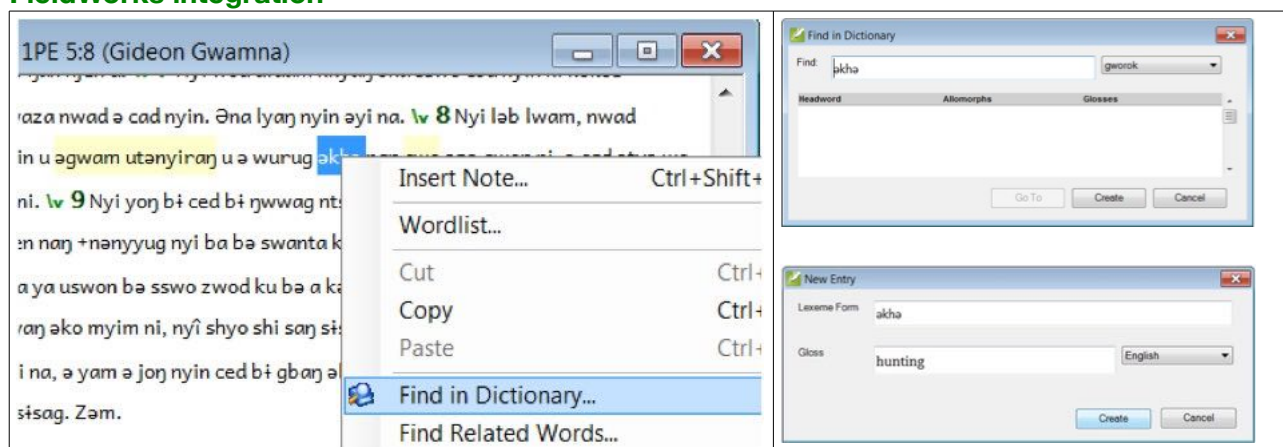
1. Use my **glossy** tool to display the whole lexicon in a table in a web browser
2. **Edit** → **Select All** the whole text, **Edit** → **Copy**
3. **Paste** it into a new spreadsheet starting from row 2.
4. In row one title the first column \lx (for lexeme) and the second \gl (for gloss).
5. Use **SheetSwiper** (Coretta 2015) to export SFM and import into FieldWorks.

Note that you can only do this once before you have to worry about creating duplicate entries. However, for users with a well developed interlinearizer lexicon, this is a good way to leverage that investment and develop it further as a dictionary.

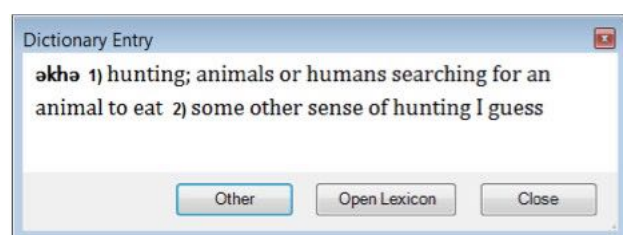
Having migrated your glosses into FieldWorks you will need to do considerable editing. It can be helpful to search for all the words which share a gloss and then compare and contrast these words.

²² Software to do this is available here <http://blog.rowbory.co.uk/sw/glossy>

FieldWorks integration



From Paratext 7.5 (and improved and simplified in later versions) you can link a translation project to a FieldWorks (dictionary) project. Right-click on any word in a project and **Find in Dictionary...** If the word is not yet in the FieldWorks lexicon then you will have an opportunity to create an entry, with a basic gloss. If it is in the lexicon then you can read the dictionary entry, and click **Open Lexicon** if you need to change anything:



It would be worthwhile **Opening the Lexicon** to develop the initial terse gloss into a full definition, separating senses as appropriate and adding any notes on usage etc that may be helpful. So in the example above, you can see what this might look like for definitions of two senses of the Gworog word **akha**.

If semantic domain information is present in the lexicon (for example from a Rapid Word Collection exercise) then we can right-click and **Find Related Words...**, using the lexicon as a thesaurus. This might help remind a translator of a more distinctive or appropriate word for that part of the translation.

How dictionaries fit into the translation workflow:

At each point in the translation workflow the translation team should be

1. looking at what is currently written about the words they are using, and
2. considering what extra information could be kept in a dictionary for later reference.

Setting up a translation project to use a dictionary

It may be helpful to set up a WeSay dictionary or a FieldWorks project on an administrator computer, then use Send/Receive to transfer that initial dictionary to other translators' computers. (FieldWorks is best for integration with Paratext, but WeSay is

much less overwhelming. For looking up words in WeSay we need to use the Dictionary Browse & Edit button.)

While drafting

The individual (or team) drafting may want to check the spelling of a word and check whether they are using it correctly and if there is any uncertainty about dialect variation. If at all uncertain about the team's standard translation of a biblical term, then they should check the biblical terms tool.

Whenever the drafter encounters an unfamiliar English (or LWC) word in the model or reference text, he should look it up in the dictionary in case it has an entry. If it is not there then he will need to check an English dictionary, ensure he understands the word well, then add an appropriate entry to the target language dictionary to help other translators.

While proof-reading

Solitary proof-reading may rarely be done in practice, but unless following a team-drafting approach it is often ideal for a drafter to proof-read their work before troubling others with it. The drafter needs to make sure they have followed the spelling and word division conventions, but also they need to ask themselves whether the translation uses the language appropriately. Here a growing dictionary can help with recalling appropriate spelling and word division, but also the drafter can look up some notes made in a dictionary about usage.

While team-checking

When a translation team has a discussion about the best words to use, they should make sure all words/phrases are in the dictionary – not only the words which are chosen to be used in the translation but also those that were rejected. Then the team also need to check that the dictionary entries all reflect the team's understanding of the language and ensure that the evidence from the dictionary would support their decision for the translation.

If there are debates about spelling or dialect, the team should ensure that all evidence is stored in the dictionary. This may mean adding notes (as in English dictionaries which mention American and British usages) explaining which words are used by which dialect.

The team should also check the biblical terms tool to ensure both that there is an appropriate agreed rendering recorded, with appropriate explanatory notes and also that the translation is using the renderings as agreed.

Common mis-spellings should be recorded in the dictionary notes field to help later writers avoid that mistake and to make them more confident of the correct spelling.

During back-translation and consultant check

A linguistically-aware back translator or supervisor, or a consultant can add appropriate glosses in the project interlinearizer. Where there is uncertainty it might be a good opportunity to **Find in Dictionary...** and ensure that relevant material from the consultant check and the consultant report are included in the dictionary.

After testing and in review sessions

During testing and review, it is especially important for translators and testers to note misunderstandings that occur, either when people are reading or listening. These may be evidence of ambiguous homographs (possibly due to under-representation of tone) or

unnatural usage or a confusion over what sense is intended, where words have more than one sense. All of this should be recorded in the dictionary to help translators in the future become aware of potential misunderstandings.

It may be that usage notes are required, or a note saying ‘not to be confused with...’ just as modern English dictionaries sometimes need to distinguish **biennial** and **biannual**, **disinterested** and **uninterested**.

When enough work is done in the biblical terms tool, we could import the terms into WeSay, however this is not necessarily an easy task. It may be simpler and more reliable to add dictionary entries for the biblical terms into WeSay manually.

Other dictionary development methods

It is quite possible and even desirable for dictionaries to develop with several methodologies at once, as long as everyone understands what is happening. This paper has focussed on some ways in which translators and consultants can contribute to a dictionary in the course of their work on the translated text, but Rapid Word Collection and natural text analysis are helpful complementary methods.

Rapid Word Collection (<http://rapidwords.net>) can be an effective way to engage whole communities in the building of a dictionary. Some semantic domains (such as social, familial, religious) may be very helpful for translators. The most domains that translators find most helpful often, in my experience, seem to be the ones that people find easier to generate words for. Beginning a RWC exercise with some semantic domains closely related to the Bible translation work may be a good way of motivating translators to be involved in building a dictionary. The WeSay software encourages definitions to be collected for words, rather than just glosses. This will make for a more useful dictionary entry. Since words are collected together with other related words, it should be natural to compare, contrast and document what is distinctive about each word rather than, say, simply glossing 4 different words as ‘shout’ or ‘relative’.

Natural text collection and analysis (from fictional stories, historical narratives and other speeches) gives a valuable insight into the natural patterns of language usage and example sentences drawn from natural texts may provide a helpful reference point for translators. There is a long tradition of dictionaries (such as the Oxford English Dictionary) relying on quotations from texts to evince definitions. More recently computerised corpus-based dictionaries have helped ensure that dictionaries reflect language as it actually is used rather than the idealised form people sometimes imagine. (Nabirye and Schryver 2012)

Publishing

In recent years the options for publishing dictionaries have multiplied considerably. Even as recently as 2001 when I participated in the C’Lela dictionary project, Unicode was still fairly new and barely supported by the dictionary development tools available, mobile telephones were not a viable target, laptops were expensive, tablets were virtually unknown, the internet was usually inaccessible from locations where Bible translation was going on, and **Paratext** was limited to use by consultants and typesetters.

While a print dictionary may be desirable for status reasons and for simplicity of distribution, it is very time-consuming and expensive to produce a print dictionary, slow

to update and it is slow to look up random entries. Just as most Bible translators now carry a library of reference works within Paratext and other software on their computer, it is much better for translators to carry the dictionary electronically.

Paratext's integration with **FieldWorks** and the ability of **FieldWorks** to Send/Receive with **WeSay** (through USB or internet) may be sufficient for translators and consultants to make use of and improve a dictionary. It is unfortunate that there are no user roles and permissions for this yet, as there are for the translated texts in **Paratext**. So every user added to the project must be trusted to edit carefully. It is probably prudent to back up the **FieldWorks** database from time to time in case one user makes a catastrophic mistake.

If we want to open up the dictionary to wider access, outside of the Bible translation team, then other software is more helpful. (Links are given in the **Key Software** section before the main **Bibliography**.)

Publishing your dictionary on the web is good for wide, public distribution, especially where internet access is cheap and reliable. **Webonary** takes **FieldWorks** databases and builds a dictionary website around the popular content management system WordPress. **Webonary** encourages publishing "early and often" ('New Dictionaries on Webonary | Webonary.org' 2015). It can cope with updates (without producing duplicates) as long as any dictionary entries that have changed are appropriately date-stamped.

In many parts of Nigeria however, web access is still very limited and unreliable and so **Lexique Pro** is a great way to install a searchable and browsable electronic dictionary on any Windows computer, with easy cross-references, links, pictures and audio. The **Dictionary App Builder** (in testing now, for **Android** devices) is an effort to put dictionaries on mobile phones. In these cases the convenience of using the dictionary offline is offset by it being slower to update dictionaries than with **FieldWorks/WeSay** or **Webonary**.

Pathway provides more electronic publishing options, including e-Readers such as Kindle. Again these avoid the need to be constantly online, but then it will be harder for everyone to keep up to date as the dictionary develops.

For those who want to collaborate on developing their dictionary online, whether with Rapid Word Collection or editing, **Language Forge** is developing into a powerful web-based environment to do this.

There are now so many different ways to distribute a dictionary electronically that it would be foolish not to take advantage of them. It may be that the only dictionaries worth printing are limited semantic domain literacy books, such as a mini dictionary of animals, or social terms etc.

5 Steering away from some dangers and discouragements

My approach here is purposely pragmatic. Many lovers of words and lovers of dictionaries expect everyone else to love the lexicon as much as they do. Lexicographers' understandable enthusiasm for dictionaries may blind them from the humbling reality that most people find dictionaries exceedingly dull or overwhelming. But we need not

persuade everyone that a dictionary is a worthy end in itself.²³ I simply want to suggest some easy ways in which writers, editors and advisors can store and refer to information about a language.

Objection: Won't maintaining and using a dictionary slow down the translation?

It certainly could slow down and utterly distract the translators unless they remember that the translation is what is primary and the dictionary is merely a place for recording and organising and cross-checking discoveries about the language. Only if translators can use and build the dictionary easily and effectively will it be worth the time invested in the exercise. That is, if translators don't refer to the dictionary or abuse it in some way, then we would be better without it.

Objection: Shouldn't a dictionary be made and language fully analysed before translation begins?

Given that language documentation (dictionary and grammar) were for many years standard pre-requisites for SIL and other organisations translating the Bible, it is understandable that field linguists may be worried by 'quick-and-dirty approaches' to linguistics (Unger 2013). The haphazard approach of building a dictionary (and doing language analysis) in parallel with the translation may indeed look foolish. However, local Christian believers are very frequently the instigators of much Bible translation and they often begin with little initial appetite for academic study whose point is not immediately clear, as Unger and others on the **Linguistics Discussion List** bear witness.

Rather than making a dictionary an annoying distraction that outside funders impose, this paper argues that we can achieve similar or better input by collecting dictionary-type data as translation work proceeds. The likely alternative to a 'dictionary-as-we-go' approach is no dictionary at all, or in a few cases a dictionary created by outsiders which the translators ignore. Worse, translators may grudgingly build a 'dictionary' which is really just a list of words and glosses,²⁴ then slavishly adhere to it and ignore the rich description that a dictionary should furnish.

Given the advantages that we have shown a dictionary can bring even to a fluent translator it is desirable not just for someone to build a dictionary, but for translators to 'buy in', reaping the benefits as immediately as possible.

Warning: Status and ownership

In many Nigerian cultures people are much more likely to share possessions than hard-won or 'exclusive' knowledge (cf Maranz 1997). This kind of cultural background may quietly undermine efforts to collect and to share a store of language wealth freely within the community. For this reason I think it is more helpful for a dictionary to be from the start clearly framed as a collaborative effort which is used and relied on by everyone who is contributing to it, rather than a status symbol to be exploited by any particular individual.

23 Even the translation of the Bible is not an end in itself but a means to translating a knowledge of God into the understanding of people who don't read Hebrew, Aramaic and Greek.

24 For example the Comparative African Word List, which is more useful for phonological study than semantics.

Warning: Dictionaries are dangerous and thesauri treacherous

Dictionaries often get a bad name because users abuse them, leading to obscure or stilted communication, slavishly concordant translation or any number of sins. As long as a language is alive and developing, a dictionary is a work in progress and all the more so for the kind of dictionary development I am advocating here. So everyone who contributes to and uses the dictionary must remember that the dictionary is not an unchallengeable authority, but a work in progress:

- There may be obvious errors or omissions; they should be corrected.
- There may be confusion or disagreement; more evidence needs to be sought to improve the entry.

Difficulties with the interlinearizer

Good use of the interlinearizer requires linguistic awareness. Naïve bilinguals and well-trained translators will sometimes ‘back-translate’ the translation into natural English (or another LWC) phrase by phrase and then use the LWC word order when glossing. This wrecks the lexicon! The interlinearizer is not the place for such a ‘free translation’. We need to account for the contribution each word makes to the whole sentence.

Some words are not easily glossed because they perform more of a grammatical function. For such words you have a choice between giving a functional gloss (eg PAST, CONDITION, RELATIVISER, END-OF-RELATIVE-PHRASE or an abbreviated version) or simply giving the most appropriate English/LWC gloss in each situation. My preference leans towards the former, since this helps to avoid illegitimately supposing the target language to follow the grammar of the LWC.

A massive list of wildly divergent alternative glosses is a tell-tale sign of something being wrong in the way you use the interlinearizer.

Finally, when glossing in the interlinearizer it may be apparent that the spelling or word division of the word in the translation is wrong. This poses a difficult problem, because we may want to gloss the word, but without perpetuating spelling errors. I think it best to:

1. Make a note of the spelling error in the text so that translators can correct it.
2. Enter the appropriate gloss, but with a * prefix. This is a common way in linguistic writing of identifying something as being incorrect or defective.

Later we can search the glosses for this * marker and attempt to correct the entry. In the example right the article **ku** is incorrectly joined to the end-of-relative-phrase marker **ni**. This is a very frequent error.

aba	mbwog	a	bay	dunio	kuni	.
who-	i return	INDEF-	coming-	world	*the REL]	.

Unfortunately when the spelling error in the translation is corrected the gloss will disappear, unless the corrected spelling is already in the lexicon. But on the other hand we do hope that as errors are corrected the lexicon will gradually improve.

Difficulties: Unstable orthography

If the orthography is still not certain when you are adding entries, then a dictionary will quickly gain both variant spellings of the one word and apparent homographs which actually conceal a difference in sound. (For example in Gworog as written in 2015

mbiyang/mbyyang/mbyang are all well attested variants of the one word meaning ‘and’.) This is bound to cause confusion. However, rather than waiting until the orthography completely stabilises before we work on the dictionary, we need some way to tame the chaos. Here are some suggestions:

- When you come across several variant spellings which you think are really the same word, see this as a learning opportunity.
 - Try to decide which spelling should be canonical (or add it to a list of words to consider).
 - When you make a decision, don’t simply delete wrong spellings, but keep a record of ‘common misspellings’ or ‘obsolete forms’. You can do this either in a custom field, or simply in the ‘Notes’ area.
- Before adding a new word to the dictionary, check whether it has already been entered in some form:
 - FieldWorks and Paratext make this relatively easy by showing similar words as you enter the new word.
 - You can also search the dictionary for a number of plausible glosses and check whether the word you are about to add is a known mis-spelling.
- Finally, some careful search-and-replace may be needed to apply consistent changes to a dictionary.
 - Note that no global replace is possible in Paratext’s interlinearizer user interface, and trying to apply changes directly to the **Lexicon.xml** file often corrupts it in Paratext’s eyes.

Spell checking and correction: Dangers and pitfalls

Automatic spell checking falls short of our needs in two areas: identifying words which are valid but not meant here²⁵ and coping with morphologically complex languages.

Working through Paratext’s word list is often harder than everyone expects. A simple (context-free) spell-checking system only knows whether a sequence of characters is approved or not. For example in English “their”, “there” and “they’re” are often confused though they all mean different things and are from different grammatical categories. In a word list we need to decide whether a particular spelling can ever (in any context) be a valid word. In each part of the text we need to ask whether this is the right spelling for this context. This is quite a difficult decision to make, but as the dictionary grows and patterns of writing are established, it should become clearer. It may be helpful in these cases of ‘commonly-confused words’ to add a note making the issue clear, for each of the words that get confused. For example the Oxford English Dictionary has this usage note for the word **their**:

²⁵ for example commonly-confused words, such as ‘there’, ‘they’re’ and ‘their’ in English, or near-miss typing errors such as ‘sear’ for ‘seat’, or ‘row’ for ‘grow’.

usage: **1** Do not confuse **their** and **there**: **their** is a possessive determiner, used for example in *they all tried to hide their faces and said nothing*, while **there** is an adverb of place or position, as in *I took a trip up there last week*, and is used in phrases such as **there is/are**: *we are aware there are problems*. **2** On the use of **their** in the singular to mean ‘his or her’, see **usage at they**.

Whenever a team has wrestled to determine the correct spelling of a word or the senses it has and how it is distinct from other words, it is a good idea to record the outcome and the full fruit of such discussions in a dictionary entry, so that they don’t have to go through the same difficult process again, and so that even if someone makes an error of judgment, all is not lost.

It is worth noting that any kind of ‘autocorrect’ feature (as is found on mobile phones) can compound the problem of typographical errors by transforming a slight mistake into a ‘valid’ but possibly unintended word. Even the suggested replacements learned by Paratext can lead translators or checks to ‘correct’ a mistake into nonsense. How do we counter this? Writers must remember that the computer is not necessarily ‘right’ with every suggestion, but that every query or suggestion is being offered only with the confidence of a child or a foreigner. The translator is still in charge and is still responsible for the text.

Prioritising: What don’t we need?

Finally, given constraints in time for lexicography it is helpful to remember what kind of information is not actually so beneficial for translators, so that we can focus our dictionary-making efforts on the most fruitful areas. All of these things are desirable for some audiences, but my comments are based on aiming to produce an electronic dictionary for translators.

- Pronunciation or audio recordings are probably unnecessary as long as the definitions and any examples are clear enough to distinguish between similar sounding words.
- Etymology may be interesting but can consume vast time and is open to abuse.
- Pictures are attractive but likely unnecessary, unless required to complete the description of a dictionary item.

Finally, completeness and perfection are desirable, but if we publish electronically we need not and should not withhold the dictionary until they are achieved. It would be preferable to mark gaps and uncertainties honestly in the dictionary, much as Wikipedia editors leave comments on Wikipedia articles (‘Wikipedia:Stub’ 2015), to guard against harm and to encourage continuous improvement.

6 Current technology gaps

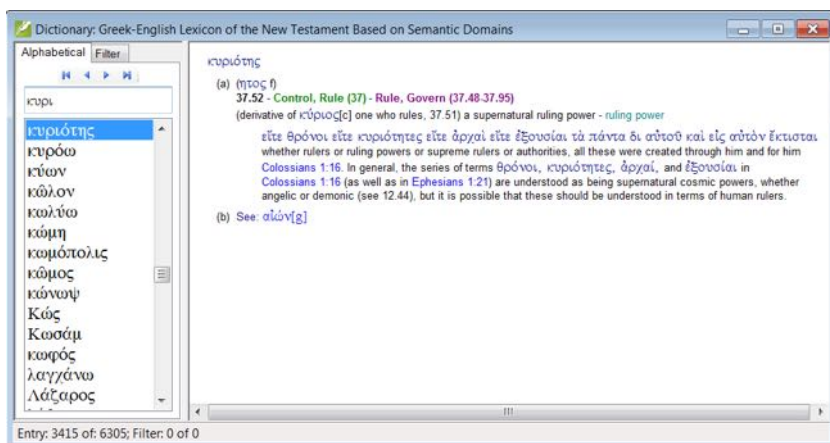
The pioneering translator and writer has many useful tools to help them write better. Paratext supplies many tools that can be used to edge towards aspects of a useful dictionary and WeSay or FieldWorks provide some helpful structure for recording and looking up knowledge of the language. However, there remain some obvious gaps. These

should not prevent us building and using dictionaries as we translate, but it does make the experience a little harder than we might desire.

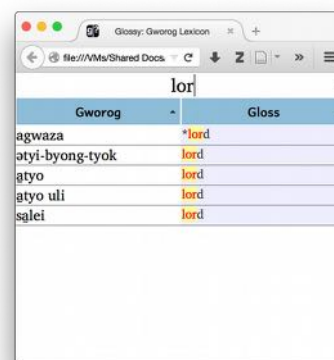
User interface

Paratext and FieldWorks were initially developed to help linguists or other outside advisors support the translation team. Most ordinary Nigerian translators I meet are overwhelmed by the apparent complexity of both FieldWorks and Paratext, generally becoming comfortable only over an extended period of use. This is typical of a user interface that tries to be general-purpose and flexible. On the other hand WeSay is much simpler, much less flexible and easier for ordinary people to manage. The major drawback is that it is really designed more as a data entry tool than a reference resource. So searching for words is not as easy as it could be. Paratext has no easy way of browsing interlinearizer glosses but lets you browse a linked FieldWorks lexicon.

What user interface is most desirable for a writer's dictionary? I think the major thing needed is a simple search function looking up either analysis or vernacular language, links to related words and popup definitions. Some combination of the Paratext source language dictionaries and my little Glossy tool for browsing interlinearizer glosses²⁶ might be a good model:



Paratext's Source Language dictionary:
full definitions and links to related words.



Glossy: browse interlinearizer
lexicon via either language.

A writer or translator does not need the flexibility (and thus complexity) that FieldWorks offers. Of course we do need a quick and easy way to edit the information to encourage writers to keep contributing to the dictionary: easily adding new senses and refining definitions.

Lack of connections

Paratext stores various lexicographical information in XML files (Biblical Terms renderings and notes, approved spellings, glosses for the interlinearizer) so these data can move into FieldWorks, WeSay or other software, but not automatically or easily.

²⁶ <http://blog.rowbory.co.uk/sw/glossy> Please note the installer leaves a lot to be desired. I originally just installed it manually on machines I wanted to use it on and I haven't really had time to make it work robustly on a wide range of environments. I would love others to do so.

When the writing system is still unstable, the word list would be much more usable if linked to a gloss (or definition) since it would clarify exactly what word is meant. When adding a new word to the FieldWorks lexicon, it would be helpful if possible glosses were supplied from the interlinearizer's lexicon. This may be the direction that Paratext moves towards, but for now, if you want to leverage work done in the interlinearizer see my instructions on page 24.

7 Conclusion

What's the use of a dictionary? A list of correctly-spelled words? A status symbol for a language? A store of jargon to impress your friends with? An authority to establish the true definition of words? A crib for a non-native speaker to understand or learn a language? A door stop? A handy step for reaching high shelves? Anything more? Would a writer ever need or want to refer to one? When would a reader reach for a dictionary? Would an oral communicator ever need one?

My contention is that dictionaries do have a strategic role to play in helping Bible translators produce high quality work, but there are several pitfalls to avoid. Far from lexicography being a grievous additional burden laid on the overstretched translator, or a Herculean task for an expert to tackle, everyone involved in pioneering translation can and must 'think dictionary' and think practically.

If a dictionary is going to be any help at all, writers must learn to use it more effectively than they may have been previously taught, learning to live with an incomplete dictionary that they themselves have a role in refining. We need to document the target language beyond glosses, and focus on the dictionary as an aid to understanding and using words clearly rather than merely for spelling. Anything that translation teams can do in this regard will pay dividends in future work and this is what we should expect of our work on a dictionary.

Beginning with Paratext's biblical terms tool, continuing through the wordlist, interlinearizer and finally with the FieldWorks lexicon integration, there is practical scope for every translation team to improve their documentation of the target language and their use of that documentation.

Much of this paper has been dedicated to the rationale for making dictionaries serve Bible translation. If we merely try to implement any programme of lexicography without understanding what will yield the best payoff then we are likely to waste time and continue to give dictionaries a bad name. While my target audience comprises consultants, linguists and senior translators, I hope the examples given may prove useful fodder for helping translators appreciate the need to use dictionaries well and to build and improve them if they don't yet exist.

As I conclude I must make two confessions: I have not yet implemented my findings very thoroughly with projects in Nigeria, nor have I amassed years of experience to back up my suggestions. However, I see a great opportunity to blend together the resurgent interest in lexicography among developing languages with an interest in Bible translation.

Key Software

All software mentioned runs on Linux and Windows operating systems.

Paratext 7.5 and 7.6: Specialist Bible translation and checking tools

<http://paratext.org> Developed jointly by United Bible Societies and SIL International.

Requires authorisation and registration to use.

FieldWorks 8.2.2: Linguist-oriented lexicography and text analysis tools

<http://fieldworks.sil.org> Developed by SIL International. No registration required.

WeSay 1.5: Simple word collection and dictionary-building tool

<http://wesay.palaso.org> Developed by Palaso. No registration required.

Language Forge: Web-based Lexicon Collaboration Tools

<https://languageforge.org> Developed by Palaso. Free registration required.

Electronic publishing routes for FieldWorks dictionaries

Webonary: Publish to the web (using WordPress as a CMS)

<http://webonary.org>

Pathway: Output scripture and dictionaries in various open formats (including Android, e-readers)

<http://pathway.sil.org> Developed by SIL International

Lexique Pro & Dictionary App Builder: Publish to Windows computers & mobile phones

<http://lexiquepro.com> and <http://lexiquepro.com/dab/>

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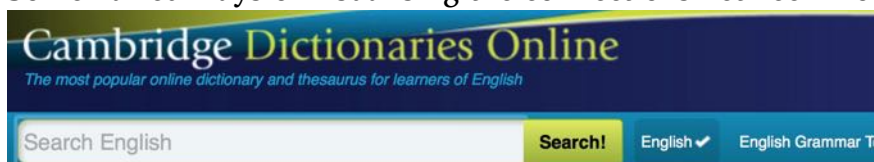
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Appendix 1: Some helpful ideas

Corpora-based dictionaries, including:

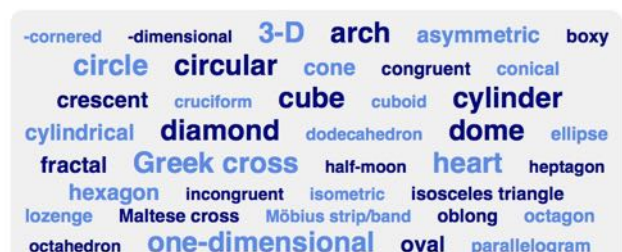
- Collins COBUILD
- Cambridge Dictionaries online (dictionary.cambridge.org)
 - Some varied ways of visualising the connections between words, such as this:



Geometrical shapes

SMART Thesaurus

The SMART Thesaurus shows synonyms, related words and phrases that make up this topic.



Appendix 2: Survey of dictionary use

In August 2015, I conducted a brief low-profile survey through social media asking questions about how the respondents use dictionaries as writers (not as readers). As expected, writers tended to consult dictionaries for technical/formal or extended writing but some never use them at all. Checking spelling, meanings and usage were the most highly ranked reasons for a writer to consult a dictionary. Writers occasionally consulted a dictionary or thesaurus to discover new words to use in their writing.

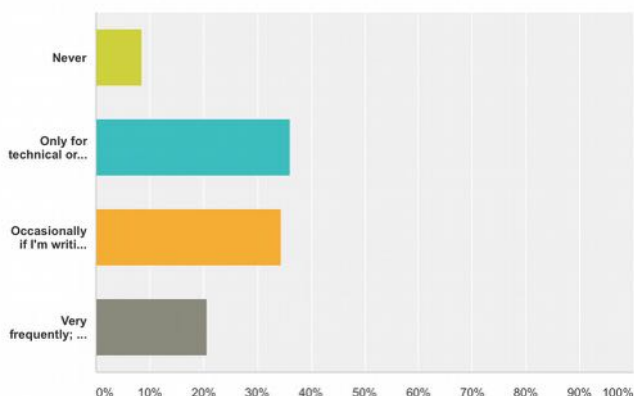
Half of the ~60 respondents replied to the questions specifically about using dictionaries in translation. Many gave revealing comments about the helpfulness or otherwise of bilingual dictionaries. It was rare for translators to refer to monolingual dictionaries in their work. The most highly ranked reasons for translators using dictionaries were *1. A reminder when I can't think of the right word in the target language* and *2. To make sure you've chosen the word that says what you mean.*

The results are available here: <https://www.surveymonkey.com/results/SM-SMCFWBS2/>

Analysis

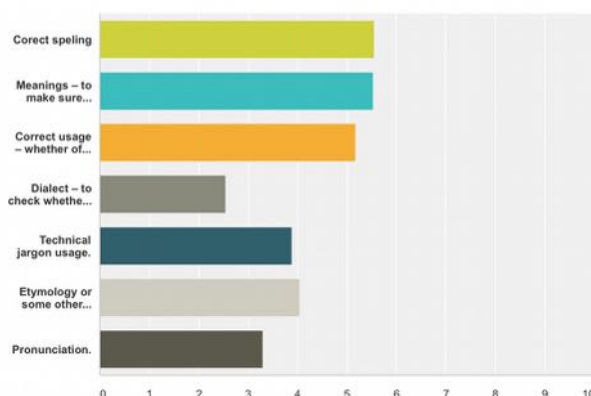
Considering only languages in which you are fluent: When do you consult a dictionary or thesaurus when writing?

Answered: 58 Skipped: 0



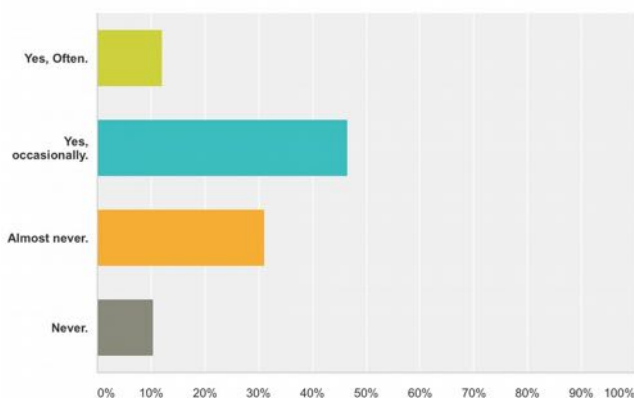
Rank these reasons for using a dictionary (as a writer) from most common at the top, to least common at the bottom. When I consult a dictionary it's most often to check for:

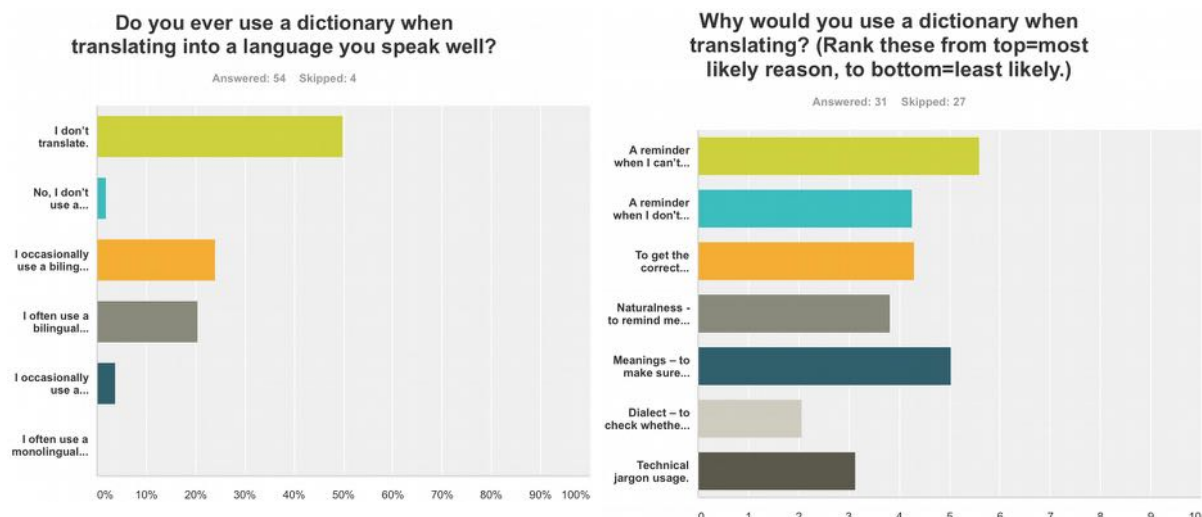
Answered: 58 Skipped: 0



Do you use a dictionary or thesaurus to discover new words (to use when writing)?

Answered: 58 Skipped: 0





Comments or stories about using dictionaries in translation:

1. Yes the translation is often whacky
2. Yes it widens my scope of knowledge as I work and helps me to present desire intension. It also most time takes much of my time as I enjoy discovering new words therefore slows my work.
3. Always the danger that a word, taken out of context, is easily applied to contexts in which it would be inappropriate/incorrect to use it
4. Most languages' lexicographers provide insufficient data on collocations. This is being tackled through open-source online databases now that space in a paper dictionary (or digital download memory constraints) is no longer a showstopper and now that the concept of a wordnet is spreading from Princeton (<http://wordnet.princeton.edu>). Dutch, for instance, is bypassing Van Dale (the paper and electronic equivalent of the OED), which has failed in this regard, and now has <http://tst-centrale.org/nl/producten/lexica/referentiebestand-nederlands/7-20>
5. There is often a difference between the spoken vernacular and the dictionary version of a language. Dictionaries often don't contain idioms or slang. In fact sometimes directly translating a phrase out of the dictionary leads you to a very incorrect understanding. For example, when I was living with a Dutch roommate, we discovered that what Americans call 'potty humour', the Dutch term 'onderbroekenlol'. Directly translated back to English that means 'underpants fun'... Needless to say that some clarification was needed before we all understood what exactly was being talked about.
6. Dictionaries can be very dangerous in translation if not fully proficient in either the source or target language as it is not always clear which usage of a word is the appropriate one for the context of the text being translated
7. Style of translated version tends to be more formal.
8. At university, there were great benefits in using a dictionary. While not being 100% fluent in the language, there was a great danger that without a dictionary you would use a colloquial or local word that you'd picked up and not the official word that made sense in the context.
9. Note: Weird questionnaire! Question 2 and 5 are the same, unless you assume question 2 is about using a dictionary for something other than translation, which must mean it's a monolingual dictionary, which was unclear from the question.

[editor's note: I tweaked the questionnaire in response to this comment!]

10. When the range of meaning is different in different languages - mguu in Swahili means everything from the hip downwards, so if you looked up foot going from English, you'd get mguu (pl. miguu). Swahili also has a generic prepositional ending, so miguuni could mean at (his) feet, or between (his) legs. Are you having fun with Ruth 3:7 yet? The same translation issue applied in the other Bantu languages in southern Tanzania.
11. Sometimes the literal translation is not the best for use in spoken language especially when using dictionary in another language but most larger dictionary so examples which is helpful
12. 21st century English language dictionaries based on corpora have a large amount of reliable corpus data. Most dictionaries in my second language (Chinese) have little usage information and are often quite poor guides to current usage, so I have to check everything against a native speaker.

Appendix: Dictionaries, Bible Translation and Scripture Engagement

To take further – wanting copies of the paper

"Unseth, Pete" < pete_unseth@gial.edu >	especially notes on software tools.
Dapila	

Dry run

And other give me a little introduction to how I got involved in dictionaries translation I first went to Nigeria in 2001 at at work in the dictionary translation project for the chilling about the transition project and gentlemen called Mr we could have been collecting words here and for about 20 or 30 years with the survey gave you got that would help mission is to come along and translate the Bible I don't think he really have a clear idea

More stuff

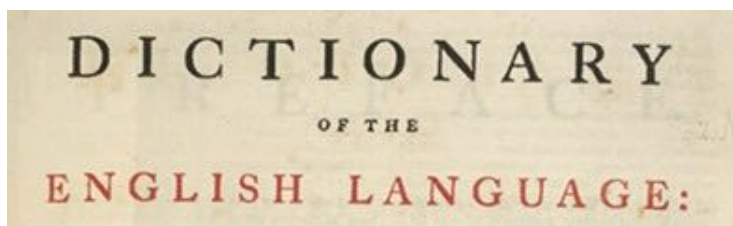
Video: may I offer my most sincere contrafibulations.

And have dictionaries anything to do with Bible translation, especially pioneering Bible translation where orthography runs wild and written corpora are scarce?

alternative intro material

How dictionaries

Let's return to Johnson, one of the standard-bearers of lexicography:



“In his view, the [English] language was in a mess, and was in desperate need of some discipline: 'wherever I turned my view', he wrote, 'there was perplexity to be disentangled, and confusion to be regulated.' However, in the process of compiling the dictionary, Johnson recognised that language is impossible to fix, because of its constantly changing nature, and that his role was to record the language of the day, rather than to form it.” (British Library 2015)

In turn many honest lexicographers setting out to prescribe how words should be written and used have succumbed to the pressure of a living language which can only really be described, at that too as only a snapshot.

Primary research:

Considering only languages in which you are fluent:

How often do you think you refer to a dictionary or thesaurus when writing?

- Never.
- Almost everything.
- Anything longer than one page.
- Only technical writing.

Is it most often to check for: [rank]

- Spelling
- Meanings – to make sure you’ve chosen the word that says what you mean.
- Correct usage – whether of a word on its own or in phrases.
- Dialect – to check whether others will understand you well.
- Technical jargon usage.
- Etymology or some other academic/philological pursuit.

Do you use a dictionary or thesaurus to discover new words?

- Yes, Often
- Yes, occasionally.

- Almost never.
- Never.

Do you ever use a dictionary when translating into a language you speak well?

- I don't translate.
- I don't use a dictionary; the words are in my head!
- I occasionally use a bilingual dictionary.
- I often use a bilingual dictionary.
- I occasionally use a monolingual dictionary
- I often use a monolingual dictionary.

Why would you use a dictionary when translating?

- A reminder when I can't think of the right word.
- Spelling
- Naturalness - to remind me of the usual patterns of using the word or phrase in the target language.
- Meanings – to make sure you've chosen the word that says what you mean.
- Dialect – to check whether others will understand you well.
- Technical jargon usage.
- Etymology or some other academic/philological pursuit.

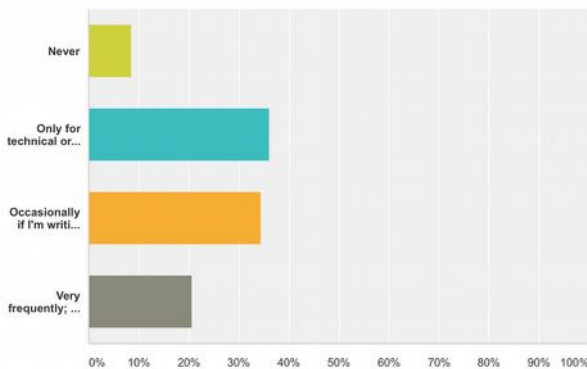
Any stories about the benefits and dangers of using dictionaries when translating?

Answers

As expected, writers tended to consult dictionaries for technical/formal or extended writing but some never use

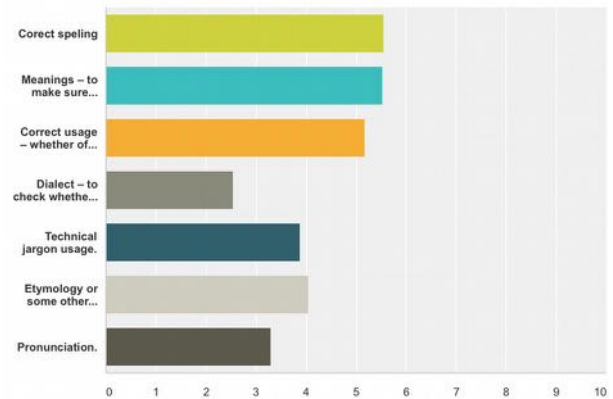
Considering only languages in which you are fluent: When do you consult a dictionary or thesaurus when writing?

Answered: 58 Skipped: 0



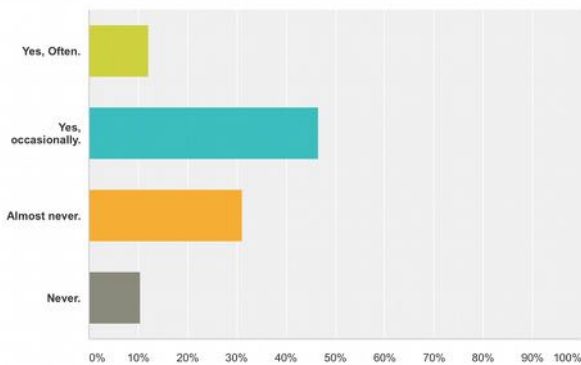
Rank these reasons for using a dictionary (as a writer) from most common at the top, to least common at the bottom. When I consult a dictionary it's most often to check for:

Answered: 58 Skipped: 0



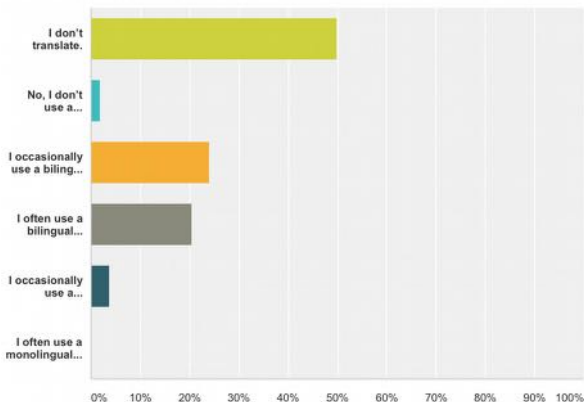
Do you use a dictionary or thesaurus to discover new words (to use when writing)?

Answered: 58 Skipped: 0



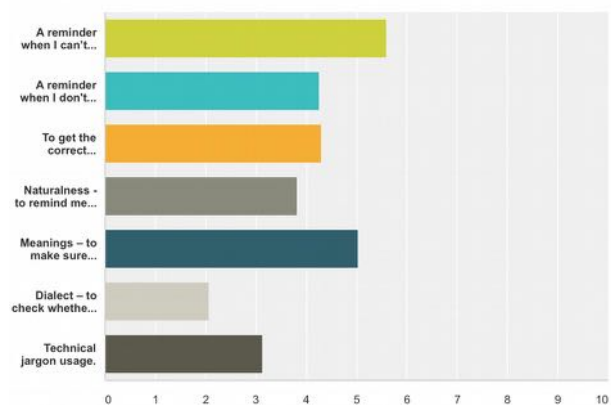
Do you ever use a dictionary when translating into a language you speak well?

Answered: 54 Skipped: 4



Why would you use a dictionary when translating? (Rank these from top=most likely reason, to bottom=least likely.)

Answered: 31 Skipped: 27



Comments about dictionaries and translation:

Yes the translation is often whacky

9/27/2015 12:02 AM [View respondent's answers](#)

Yes it widens my scope of knowledge as I work and helps me to present desire intensity. It also most times takes much of my time as I enjoy discovering new words therefore slows my work.

9/26/2015 3:11 AM [View respondent's answers](#)

Always the danger that a word, taken out of context, is easily applied to contexts in which it would be inappropriate/incorrect to use it

9/25/2015 7:24 PM [View respondent's answers](#)

Most languages' lexicographers provide insufficient data on collocations. This is being tackled through open-source online databases now that space in a paper dictionary (or digital download memory constraints) is no longer a showstopper and now that the concept of a wordnet is spreading from Princeton (<http://wordnet.princeton.edu>). Dutch, for instance, is bypassing Van Dale (the paper and electronic equivalent of the OED), which has failed in this regard, and now has <http://tst-centrale.org/nl/producten/lexica/referentiebestand-nederlands/7-20>

9/25/2015 4:03 PM [View respondent's answers](#)

There is often a difference between the spoken vernacular and the dictionary version of a language. Dictionaries often don't contain idioms or slang. In fact sometimes directly translating a phrase out of the dictionary leads you to a very incorrect understanding. For example, when I was living with a dutch roommate, we discovered that what American's call 'potty humour', the dutch term 'onderbroekenlol'. Directly translated back to english that means 'underpants fun'... Needless to say that some clarification was needed before we all understood what exactly was being talked about.

9/25/2015 1:21 PM [View respondent's answers](#)

Dictionaries can be very dangerous in translation if not fully proficient in either the source or target language as it is not always clear which usage of a word is the appropriate one for the context of the text being translated

9/25/2015 12:32 PM [View respondent's answers](#)

Style of translated version tend to be more formal.

9/25/2015 10:48 AM [View respondent's answers](#)

At university, there were great benefits in using a dictionary. While not being 100% fluent in the language, there was a great danger that without a dictionary you would use a colloquial or local word that you'd picked up and not the official word that made sense in the context.

9/25/2015 9:21 AM [View respondent's answers](#)

Note: Weird questionnaire! Question 2 and 5 are the same, unless you assume question 2 is about using a dictionary for something other than translation, which must mean it's a monolingual dictionary, which was unclear from the question.

9/24/2015 11:08 PM [View respondent's answers](#)

When the range of meaning is different in different languages - mguu in Swahili means everything from the hip downwards, so if you looked up foot going from English, you'd get mguu (pl. miguu). Swahili also has a generic prepositional ending, so miguuni could mean at (his) feet, or between (his) legs. Are you having fun with Ruth 3:7 yet? The same translation issue applied in the other Bantu languages in southern Tanzania.

9/24/2015 9:40 PM [View respondent's answers](#)

Sometimes the literal translation is not the best for use in spoken language especially when using dictionary in another language but most larger dictionary so examples which is helpful

9/24/2015 9:11 PM [View respondent's answers](#)

21st century English language dictionaries based on corpora have a large amount of reliable corpus data. Most dictionaries in my second language (Chinese) have little usage information and are often quite poor guides to current usage, so I have to check everything

against a native speaker.

9/24/2015 7:04 PM [View respondent's answers](#)

	1	2	3	4	5	6	7	Never	Total	Score
Correct spelling	4 1 3	1 6	1 4	8 5	7 4	5 3	1 4	5 3	5 6	5 .
Meanings – to make sure you've chosen the word that says what you mean.	2 8 6	2 8 6	1 7 0	7 4	8 5	3 2	0 0	5 3	5 6	5 .
Correct usage – whether of a word on its own or in phrases.	1 4	2 7 5	2 0 1	1 8 0	5 3	3 2	0 0	1 0	5 5	5 .
Dialect – to check whether others will understand you well.	3 2	1 4	0 0	3 2	1 0	8 5	1 7 0	5 3 0	5 6	2 .
Technical jargon usage.	5 3	1 0	1 2	1 9 1	1 0	1 5	5 3	2 1 2	5 7	3 .
Etymology or some other academic/philological pursuit.	7 4	7 4	1 6	2 0 1	1 4	1 4	1 4	1 8 0	5 5	4 .
Pronunciation.	0 0	5 3	1 2	1 0	2 3 3	8 5	1 0	2 8 6		

Purpose

A very brief paper: encouraging translators, advisors, consultants to value dictionaries and giving most efficient ways to develop and use them. However, the hook will probably not be an interest in dictionaries but in translation quality and saving waste.

Included will be:

- Story – Bulus Doro and the C'Lela dictionary: misguided but...
- Analysis. What are we missing?
- Exhortations: proposed solutions. (Big picture, concept)
- Suggestions: specific implementable steps.
- Lacks

- Warnings: Dangers to avoid. (In the construction and use of dictionaries.)
- Beware.

What kind of dictionaries will be most useful to translators?

Outline:

•

Analysis

What kind of support do translators need?

- Help for writers/editors choosing the right words and usage.
- Translation is a difficult task.
 - Writers need to remind themselves of the norms and distinctive features of each language while in the throes of translation so they can confidently make the right choices.
 - Don't look at the light: Editing and translation are hard
 - Polysemy and Ambiguity
 - Guard against unnatural usage: Is this the normal, clear way of saying this?
 - GOOD DEFINITIONS + USAGE + WARNINGS.
- Writers may need a prompt to remind them of other ways of expressing something.
 - RELATED WORDS, DEFINITIONS.
- Everyone has a dictionary in their head, but no writer has the entire language knowledge of the community in their head at once
 - Even the best writers forget words and technical writers can forget which are common and which are more niche, jargon words.
 - A dictionary can be a learning tool.

The process of translation in underdeveloped languages is somewhat lossy and inefficient.

- Some teams agonise for ages regarding decisions. Repeatedly.
 - Every time a consultant comes along to help they may revisit the decision. This is not necessarily the same as circular reasoning or discussion, and it does not appear that the decisions necessarily become better through further discussion. When so much is uncertain, insiders and outsiders.
 - Commonly these decisions and debates concern:
 - Key biblical terms.
 - Ordinary patterns of language vs church jargon.
 - Dialect issues. (location, age, gender)

What are dictionaries typically used for? What untapped potential is there?

- Writers
 - [Boring] Correcting spelling.
 - [Bad] Helping you use big, unfamiliar words in order to impress others.
 - Potential: checking usage, being aware of alternatives.
- Readers:
 - Telling you what an unfamiliar word really means and perhaps connecting written word to its sound.

Dictionaries are not just about correct spelling

Is a dictionary simply an authority on correct spelling? No, but many use it as such. Is a dictionary an authority as to the correct meaning of obscure words? No, though many use them that way. In fact, many people use dictionaries mainly as rhetorical devices. Many of us have heard ‘erudite’ sermons or speeches where the speaker has quoted a dictionary definition. (A cynic might suspect that this happens more when the speaker is somewhere ill-educated yet is trying to impress or bamboozle his audience.)

Translators need appropriate dictionaries

[extract the problem analysis, then keep this about the kinds of dictionary that can help translators]

Major needs:

-

Minor needs:

-

What we don’t need:

- pronunciation,

We need dictionaries, but not just any dictionary.

- Semantically-linked dictionaries help writers consider which of a variety of words might best fit the context and communicate what they want to communicate effectively.
 - Since choice implies meaning [cf cognitive linguistics?]
- A dictionary is a growing store of community language wealth: it can be like having a group of elders at your elbow at all times.
- Dictionaries help consultants ask more intelligent clarification questions and certainly can speed preparation and save consultants having to ask so many questions in face-to-face sessions.
- One dictionary or many?
- What characteristics of dictionaries are important?

- Not just glosses, but definitions.
- Compare and contrast.
- Example based.
- Dialect notes.
- Usage notes: register, formality, age-appropriateness/generation, jargons.
- Is this overwhelming? Is it impossible?
 - Yes, but to be useful it doesn't need to be complete. Something is better than nothing. Let's think about the processes that can let us use and build working dictionaries as we do our translation and writing.
 - What are the barriers?
 - Showing how to use a dictionary well.
 - Distributing / giving access to the [latest version of] the dictionary.
 - Controlling contributions.

Literacy needs dictionaries

How can people use dictionaries to become better writers?

- Basic literacy
- Advanced literacy

Dictionaries are dangerous - abuse

What are the main dangers dictionaries pose when abused? How can we ameliorate these?

- Everyone loves simplification and over-generalisation.
- Are descriptive
 - Doesn't tell me how to speak/write but tells me in advance what people generally understand by something so give me a good idea about whether I'm going to be successful in communicating what I want to communicate.
- Are incomplete: They need to grow.
- Dictionaries cannot alone teach someone to be a good writer.

Explore the ways dictionaries can be abused by individuals and groups.

The attitude we need to cultivate: openness, evidence-based.

eg. Patrick Obahiagbon, (Nigerian Member of House of Representatives). ²⁷ Every word I use is in the dictionary but the only difference is that I use a multiplicity of dictionaries. My eliptic and polyvalent modus of communication has been something that I have

²⁷ <https://www.youtube.com/watch?v=OF0Re7gJBb8>
<https://www.youtube.com/watch?v=96A4ZctoBdw>
<https://www.youtube.com/watch?v=kBZn2pg2k78>

accliatished myself to for donkey-years and it would be unfair to me to say that it is just razzmatazz... This is my logomakey.

Dictionaries are difficult

How can we ameliorate the major difficulties in building and maintaining dictionaries so they they give us more than we put into them? Is that possible?

Major difficulties:

- Evolving spelling / orthography
 - How can we cope with wholesale orthography changes?
 - Procedural
 - We need to learn to live with some uncertainty.
 - Need some clear guidelines for everyone on how you
 - Technical
- Partial data
 - How can we
- We may want to
- It takes too long
- How do we avoid it distracting us?
- Cohesion: Data in different places – do we have to duplicate it?
 -

Dictionaries, Bible Translation and Scripture Engagement – History

As the printing press facilitated

- Latin-English & Italian-English dictionaries
- 1604 Robert Cawdrey
<http://www.library.utoronto.ca/utel/ret/cawdrey/cawdrey0.html#htmltable>
 - Single author. Equivalents.
 - Concerns:
 - Pretentious preachers and teachers who use big talk their mothers wouldn't understand rather than using plain talk that everyone understands.
 - "...especially Preachers [who]... speak publicly before the ignorant people, are to bee admonished, that they neuer affect any strange ynckhorne termes, but labour to speake so as is commonly receiued, and so as the most ignorant may well vnderstand them: neyther seeking to be ouer fine or curious, nor yet liuing ouer carelesse, vsing their speech, as most men doe.... Some men seek so far for outlandish English, that they forget altogether their mothers language, so that if some of their mothers were aliue, they were not able to tell, or vnderstand what they say, and

yet these fine English Clearks, will say they speak in their mother tongue; but one might well charge them, for counterfeyting the Kings English.”

- People using English as if it were Italian.
 - “Another chops in with English Italianated, and applyeth the Italian phrase to our English speaking....Doth any wise man think, that wit resteth in strange words, or els standeth it not in wholesome matter, and apt declaring of a mans mind? Do we not speak, because we would haue other to vnderstand vs?”
- Dr Johnson
 - Sixth ed:
<https://archive.org/stream/dictionaryofengl02johnuoft#page/n147/mode/2up>
 - Innovations: literary quotations (text-based); sense divisions; usage notes.
- Oxford English Dictionary
 - More illustrative quotations
- COBUILD, the Bank of English
 - <http://en.wikipedia.org/wiki/COBUILD>
 - [http://www.collins.co.uk/page/The + History + of + COBUILD](http://www.collins.co.uk/page/The+History+of+COBUILD)
 -

Suggestions

Paratext already incorporates 4 kinds of dictionary-like tool: the word list, interlinearizer, Biblical Terms and FieldWorks lookup. While the wordlist and the interlinearizer provide the services most people expect from a dictionary, if we are aiming for a more careful meaning-focussed writing tool, the most gentle and rewarding start is to use the Biblical Terms Tool.

A quick survey of the major tools available:
(For building, looking up)

- Paratext: Biblical Terms tool
 - Barebones, keyed by the source language,
 - Main field (can put glosses in brackets).
 - History (why we no longer use)
 - Notes
 - Glossary entry.
- Paratext: Word list (and wiggly red underlines)
 - Simply for spell-checking.
 - WISHLIST: integration with interlinearizer, to help work out what are

- Major limitations for translation:
 - Not related to meanings.
 - Cannot handle orthography changes or indeterminacy.
- Paratext: Interlinearizer
 - Limitations
- FLEx: Integration with Paratext
 - Limitations:
- FLEx freestanding
- WeSay
- Publishing & reference solutions

Some principles in how to use stuff:

- Never throw information away. Be ready to write it down. Build it into your processes.
- Look things up. If it's not there then you need to add it.
 - Sometimes you might need to research more than just one word but a whole semantic domain.
 - eg. kinship terms.
- Write only what is clear and useful; don't try to be too exhaustive.
- Don't wait for it to be complete before you use it.
-

Challenges:

- How to live with incompleteness and uncertainty?
- How can more people contribute?
- How do we avoid trampling over each others' work?
- Orthography instability.

Start using the Biblical Terms tool well, and make that a pattern for future work.

- Abuses: tentative.
-

Moving on from the Bib Terms Tool

- Limitations of the Bib Terms Tool
 - It's indexed by the source language texts, so is only one side of a bilingual dictionary whereas the reverse direction is also very helpful as a cross-check

and as a writing aid. You cannot simply transform an English-French dictionary into a French-English dictionary and end up with a useful product.

- In the Biblical Terms Tool we tend to focus on limited ‘technical’ senses of words; it’s helpful to know what the more common senses and usages of terms are too. While you can enter that information, it’s going to be very hard to keep everything clear.
- Glosses and interlinearizer.
- Easy Tech
 - FieldWorks-Paratext integration.
 - What needs to be done by administrators?
- Technology gaps and difficulties
 - How can we avoid waste or duplicated effort?
 - Can we copy everything from Bib Terms into a bigger flexicon?
 - How to deal with phrases?
 - Where do we write usable notes?
 -

What about outside of translation and Paratext?

- Mobile phone dictionaries?
- Mini (domain-specific) dictionaries?

Beyond a gloss: What do I really need to know?

- How is the gloss deceptive? eg
 - different polysemy
 - common vs technical / unusual
 - more specific / general
 - connotations / associations
 - combinations
- How does this word relate to other words?
- What collocations and combinations are there?
 - eg prepositions or morphologies commonly associated.

Examples:

- Hausa: hannu
 - hand

- BUT: this is the common word for upper limb, ie arm, and covers the limb from the shoulder. Many Nigerians intend this when they use the English word ‘hand’.
- Hausa: ja
 - red
- Hausa: yamma
 - evening
 - BUT: it actually means 4-6pm, before it gets dark, whereas in British English ‘evening’ would usually be later beginning with ‘evening meal’ around 6pm or so.
- Hausa for cloth
- Hausa: hakuri
 - patience
 - Idioms: ka yi hakuri (do/have patience) is a polite apology, not a frustrated chastisement.
- Greek: πιστευω
 - believe
 - used with prepositions/cases:

Workflow impact

Drafting

Are we ready to standardise on spelling yet? If so, then approve words. Make sure that we’re building an awareness of common mis-spellings.

Internal checks

Big Picture issues, KBTs

External checks

Testing

Literacy

Lacks

Currently we can look up Source language lexical items in several convenient dictionaries within Paratext. Logos, BibleWorks, Accordance also offer similar convenient functions.

Trying to implement this for a newish project

eg. Gworog

Resources / Bibliography

Need to seek

- John Roberts, lexicography notes 2000 + ETP

Identified

- Rikoto, Bulus Doro, Personal Conversation, 2001.
- Dettweiler, Stephen, Personal Conversation, 2011.
- Olson, Donald et al. *Notes on Translation No. 46* (1973): n. pag. Print. (Found in Translator's Workplace, Logos edition logosres:sl-not46;art = aid\$5F17)
-

Addenda

The FieldWorks interface in Paratext 7.6 has developed from that used in Paratext 7.5 and seems to be faster and less overwhelming, which should encourage its adoption.

Technology solutions that might be worth keeping an eye on:

- languageforge.org

Stories

Bulus Doro and the C'Lela dictionary: Make a dictionary and then a (missionary) translator will come along and translate the Bible using the dictionary (lookup table).

- Bulus Doro Rikoto was a young C'Lela-speaking Nigerian teacher working in another part of the country when he heard that the Bible was being translated for people there. Not wanting his own people to be left out he determined to do what he could to see the Bible was translated into C'Lela. (Looking back now I do wonder whether he was mainly thinking in terms of prestige for the language rather than comprehension of the content.) The best way he could see to achieving that end was to collect as many C'Lela words as he could with meanings given in the languages of wider communication English and Hausa. That he did in his spare time over around 20 years, with the thought that he could make a dictionary that a missionary could use to translate the Bible. Since people generally think of translation as replacing words from one language with equivalents in another, the dictionary as a lookup table for a missionary was his way of speeding the Bible translation he didn't feel he could do himself.
- It actually ended up being a literacy tool, and helpful for non-C'Lela translation assistants.

NBTT ICTP 2011: I've made a dictionary:

- Having mentioned to a class of budding translators at Nigeria Bible Translation Trust my involvement in the C'Lela dictionary, a man approached me to show me his dictionary. I asked how many words he had collected and it turned out to be several thousand. That is very unusual in a Nigerian context so I was very

interested to see his work. It transpired that he had taken a commercial English dictionary and for each of the headwords had written in a one-word equivalent in his own language. The definitions and sense divisions remained as they were for English. I was left struggling to work out how to diplomatically break it to him that his work was almost entirely useless. The only conceivable audience who would find such work useful would be a native speaker of his language who was trying to understand English but whose English was good enough to understand the English definitions. At best I suppose he was just scrabbling around trying to find somewhere to start.

- In the section I hope to present some more useful ways to start so that we can make the most use of our time and get the greatest benefit from working on a dictionary.

Opening story.

I first went to Nigeria to work on a dictionary. The story behind that dictionary is fairly instructive.

Bulus Doro Rikoto was a young C'Lela-speaking Nigerian teacher working in another part of the country when he heard that the Bible was being translated for people there. Not wanting his own people to be left out he determined to do what he could to see the Bible was translated into C'Lela. (Looking back now I do wonder whether he was mainly thinking in terms of prestige for the language rather than comprehension of the content.) The best way he could see to achieving that end was to collect as many C'Lela words as he could with meanings given in the languages of wider communication English and Hausa. That he did in his spare time over around 20 years, with the thought that he could make a dictionary that a missionary could use to translate the Bible. Since people generally think of translation as replacing words from one language with equivalents in another, the dictionary as a lookup table for a missionary was his way of speeding the Bible translation he didn't feel he could do himself.

Happily, even though his thinking was unfortunately misguided, the dictionary did actually end up being a significant literacy tool, and helpful for non-C'Lela translation assistants.²⁸ Even after man-years of editing there were many errors and defects present in the dictionary, but it was still useful. To

Missionary translators needed target-language dictionaries.

For a while, out of necessity [seek some resources] the Bible was translated in many places by outsiders. The outsiders had to steep themselves in a community to learn the language and culture before they began to express the message of the Christian faith and the Bible in a way that would be faithfully understood in that language and culture. In this period it was easy to assume that the hardest part of Bible translation was grappling

²⁸ Around 12 years after the publication of the C'Lela dictionary it seemed to lend certain symbolic weight to the official standardisation of the language, even if there is little evidence of it being very widely used.

with the target language. Many missionary translators produced dictionaries in an effort to record and remind themselves of their own observations of the language.

Now that mother-tongue translators are the norm for Bible translation, it's all too easy to assume that the challenge of understanding the target language have gone away.

It is very good that translators have now a dazzling array of electronic resources (sometimes so dazzling that translators get overwhelmed and don't use them at all). Most resources for the translator rightly focus on understanding the source texts well. Most useful and probably most used are the SIL translators notes or UBS handbooks, as well as numerous translations in English and a few other languages. Translators have access to commentaries and also to source language dictionaries.²⁹ Unsurprisingly these resources use English, French and a few other languages of wider communication.

But what is available for the other side? Do translators need any resources to help them work with the language, culture and history of their audience to help them too understand the message of the original text?

[Diagram:

Translator as mediator between two texts

The world of the source text: language, culture, history	Multicultural person.	The world of the audience: language, culture, history
Source text	Translator	Translated text

aaaaaaa

Translation-aware dictionary entries

For translators

- Core:
 - Different senses (distinguished by context) + figurative uses
 - Compare & contrast with similar words & opposites.
- Examples:
 - Hausa 'itace', Greek ξύλον, English 'tree', 'wood', 'firewood' Hebrew עֵץ
 - English: tree

²⁹ In the Paratext computer software and SIL's Translator's Workplace which are widely distributed among translators.

- Translation note: Most fruit-bearing trees in English are known by their fruit and the word ‘tree’ so that often the word ‘tree’ is required in English when Greek ξύλον or Hebrew עֵץ is not actually used, for example the ‘fig tree’.
- BDAG: Greek
 - 1. wood (unmanufactured material)
 - 2. object made of wood
 - a. of a piece of wood designed for a specific purpose
 - b. a device for confining the extremities of a prisoner, stocks
 - c. a wooden structure used for crucifixion, cross
 - 3. tree
- Hausa **ji**
 - Usually glossed **hear** but it performs the role of English **feel** for experiencing something (pain, sensations).
 - Also performs role of English **speak** regarding language competence, similar to **understand**.
 - Bargery:
 - ji. I. [ji/]. 1. {v.tr.2a}. (a) Hear. {ji + yo/ + , (2e.ii); ji"yu + ; ji"wu + (3a.ii)}. e.g. na/ ji a majiya I heard from reliable source. kunne ya/ ji amma zuciya ba ta kar'ba ba, it was heard, but not credited. (b) Understand. e.g. na/ ji abin da ka ce, I understand what you said. (=) fahimta.) ya/ ji Hausa, he understands Hausa well. yina jin Hausa, he knows a certain amount of Hausa. (c) Feel, suffer. ji zafi, feel pain or heat. ji tsoro, be afraid. ji wuya, suffer trouble. ji da/'di, be pleased, happy. (d) Obey. yina jin linzami, it (a horse) is docile; he (p.) is tractable. yina jin linzaminta, he is clay in her hands. yaron (yaran) nan ba ya/ ji, this lad is a disobedient child. (e) Taste, smell. na/ ji zak'insa, I tasted its pleasant flavour. na/ ji warinsa, I smelt its odour. (f) Be concerned about. nna jin wa/ne, I am concerned about so-and-so. nna jin wannan tafiya, I am concerned about this journey (which is being taken or about to be taken). (g) Cause p. to experience pain (only combined with ciwo, takaici). e.g. ya/ ji masa ciwo, he caused him to suffer pain (used of pain suddenly caused, e.g. by thorn; cf. ji da;'dan'dana I.3; gana I.2). (h) yina jin aiki, he is working energetically and persistently. (j) ya/ ji gari, he suffered poverty. (Vide jin gari.) (k) ya/ ji jiki, he did not feel fit. (l) [ya/ ji i" ji/> = ya/ ji ya" ji/> = ya/ ji yi" ji/>], he got something to go on with, a trifle on account, a morsel of food to stave off the pangs of hunger. ban kama shi ba amma ya/ ji ya ji (i ji; yi ji), I did not catch him but got in a blow which he felt. (m) suna jin kansu, they are experts and they know it. (Cf. jin kai.) (n) ji k'ai [ji/ k'ai], take pity

on, feel sorry for p. (and do something to lighten his trouble). e.g. Allah ya ji k'ansa! God have mercy on his soul! (Cf. jin k'ai) Audu ya/ ji k'aina Audu took pity on me. na/ ji k'an Audu, I took pity on Audu. (Cf. jin k'ai.) (o) ya/ ji wuta, he warmed himself by the fire. (Vide jin wuta.) ya/ ji wutar makaranta, he has been benefited by his schooling. (Cf. sha wuta.) 2. {v.intr.only in past}. Be sufficient to provide the required taste. e.g. gishiri ya/ ji. 3. Vide majiya; majikira.