



Sound and Translation: A Multimedia Approach to Increase Accuracy, Efficiency, and Quality

By Madeline Newman Ríos

Translation, for purposes of our profession, is a transfer from one written language into another written language. As such, it is generally a visual process involving the eyes and the brain. Yet written language is essentially derived from spoken language, the structure of which is profoundly influenced by phonetic considerations. For instance, when we read, the brain tends to reproduce the sound of the language internally. In light of this fact, translators might want to consider adding an audio component into the translation process. The following will briefly explore two questions. First, how does sound influence aspects of language that are relevant for translators? Second, what audio techniques can be used to increase translation efficiency, accuracy, and quality? Interpreters are not the only ones who can benefit from audio techniques to improve language skills.

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Using Sound to Increase Awareness and Develop Translation Techniques

I first became sensitized to the importance of phonetics to translation through an on-the-job experience. A certain in-house translation department, which had been translating its manuals using translation memory software, had fallen behind schedule and needed a freelancer to supplement their efforts. I was the lucky lady who got the job. As I sat floundering over noun strings in a text involving highly specialized technology, my supervisor, whom I will refer to as Fulano (not his real name), looked over my shoulder

and pointed out that I had made a mistake. The sentence and my allegedly flawed translation were as follows:

- **English:** “This method achieves a significant reduction in emissions.”
- **My Spanish Translation:** *Con este método se reducen en gran medida las emisiones.*
- **Literal Back-Translation:** “With this method, they are reduced in great measure—the emissions.”

This led to the following exchange:

Fulano: “You forgot the word achieves.”

Me: “Oh, is ‘achieves’ a technical term for your industry?”

Fulano: “No.”

Me: “Well then, why does it need to be in the Spanish?”

Fulano: “Because it’s in the English.”

Most Spanish speakers I have consulted have confirmed my opinion that a literal incorporation of the word “achieves” creates a stilted, muddled sentence in their language. Yet Fulano’s preferred version, *Este método logra una reducción significativa en las emisiones*, became the “certified” translation of the sentence, enshrined for eternity in the company’s translation memory database and reproduced in every manual published by them thereafter.

The incident upset me, in part because it is a prime example of how translation memory can be misused. As I repeated the story to friends, it occurred to me that I had phonetics on my side. “You can hear it,” I would tell them. “Just say the sentence in English.”

“This method achieves a significant **reduction** in emissions.”

The phonetic stress falls squarely on the word “reduction,” and, consequently, the psychological mental/cognitive focus of the listener/reader also revolves around the concept of reduction. The Spanish translation, *Con este método se **reducen** en gran medida las emisiones*, also keeps the phonetic stress on the concept of reduction, and thus conserves the psychological focus of the sentence. If we were to analyze a literal translation, it would

Phonetic stress can override traditionally analyzed considerations to produce a preferred structure for a sentence.

not pass that same litmus test. In the sentence *Este método logra una reducción significativa en las emisiones*, the stress falls primarily on the concepts of *logra* (“achieves”) and *significativa* (“significant”), which are secondary conceptually.

Other authors and linguists (Marina Orellana,¹ for example) have noted the tendency of the English language to emphasize nouns versus the tendency of Spanish to emphasize verbs. It is my theory that phonetic stress is one of the reasons this phenomenon holds true. As such, the word “achieves” in the original English sentence, “This method achieves a significant reduction in emissions,” makes its primary contribution as a stylistic/structural component, allowing the concept of reduction to be expressed as a noun. More specifically, “reduction” becomes the direct object of the sentence, with all of the ensuing phonetic/psychological emphasis.

Phonetic stress can override traditionally analyzed considerations to produce a preferred structure for a sentence. A good example of this can be seen in the expression: “To boldly go where no man has gone before.” Stephen Pinker, a professor of neurolinguistics, in his book *The Language Instinct*, uses this example to illustrate that prescriptive grammar rules (e.g., “Never use a split infinitive.”) are sometimes inane. He remarks: “To go *boldly* where no man has gone before? Beam me up, Scotty; there’s no intelligent life

down here.”² Pinker instinctively rejects the version that keeps the infinitive intact. In my opinion, a phonetic analysis underscores why his instincts are well grounded (if you pardon my pun). Listen to what happens to the words “boldly” and “go” in the disputed phrases:

Star Trek Version: “To **boldly** go where no man has gone before.”

Grammar Teacher’s Version: “To go **boldly** where no man has gone before.”

In the *Star Trek* version, the words “boldly” and “go” are not only stressed in terms of decibel level, but they also take longer to say. Thus, the concept of “go” gets a good second to sink into the mind of the listener. This is time enough to travel 186,000 miles at warp speed, which is the intended image that the writer hopes to conjure up in your mind. In the “grammar teacher’s” version, the word “go” is spoken on an upbeat, so ephemerally as to hardly be noticed at all.

The underlying theory for employing sound-based methodologies is the concept of “what sounds good is good.” That concept is, of course, a debatable half-truth. There are many instances where “what sounds good” is not actually good, particularly when it comes to employing correct terminology. The “what sounds good is good” method is mostly applicable to identi- ➤

fyng natural structures in a given language, which may or may not be accepted under prescriptive grammar rules. For example, if we make an oral comparison of the sentences “I’ve read many times *Cinderella*,” and “I’ve read *Cinderella* many times,” we can easily note the English language’s strong preference for keeping the direct object close to the verb. Nonetheless, this pattern does not reach the level of a prescriptive rule in English, and high-register English sometimes “splits” the verb from its direct object (e.g., “You are ordered to file, within 30 days, your answer to the plaintiff’s complaint.”). Examples of natural structures that are not accepted under prescriptive grammar rules are easier to come up with. (Did I just end a sentence with a preposition?) My favorite example is: “The judge’s grammar is terrible. I speak better English than him.” This is an actual quote from a court reporter who did not get the joke.

Indeed, the use of “than him” sounds pretty good to most native English speakers. The use of the objective case for the pronoun “him” when not followed by a verb is a deeply ingrained, natural structure in English. Moreover, it is arguably worth employing and, in fact, preferable for translating and/or interpreting certain informal language expressions such as “It’s me.” Yet this structure is considered grammatically improper under prescriptive grammar rules and should be avoided when translating high-register language, particularly in written documentation.

Using Sound-Based Analysis

Sound-based methodologies are useful tools for exploring and utilizing our instincts concerning language. Their suggested use is for purposes of complementing and strengthening translation technique,

Phonetic analysis is a method that can be used to create an awareness of the impact of sound on language structures.

which I would define as follows: *Translation technique is the ability to routinely apply translation principles derived from an analytical awareness of comparative language structures.*

An analytical awareness of comparative language structures is developed through a combination of experience with, and exposure to, language, experimental analysis, instruction, and readings in language and translation theory. Sound-based methodologies can play a role in this process. For example, our “*Cinderella*” sentence (“I’ve read *Cinderella* many times.”) is simple enough to be explored instinctively. Listeners can “hear” the English preference for using a word order where the verb is immediately followed by its direct object. This can help the translation student or professional develop a translation technique that avoids unclear and/or awkward structures in a translation. To illustrate this point, suppose that a sentence would translate as follows.

Hypothetical Literal Translation of a Spanish-Language Text: “The U.S. will provide, within the year 2001, funds in the amount of two hundred million dollars to the government of Colombia to combat drug trafficking.” One technique application would be to immediately identify the direct object (“funds”) and move the prepositional phrase “out of the way.” Using this approach, the sentence could be rendered in a more natural fashion.

Translation with Application of Technique: “The U.S. will provide funds in the amount of two hundred million dollars to the government of Colombia within the year 2001 to combat drug trafficking.” Depending on the type of text in which this sentence is found, other translation and/or editing techniques might be applicable. For instance, if the sentence were part of a magazine article, the following translation could be justified on the grounds of logic.

Possible non-legal translation: “By the year 2002, the U.S. will provide the Colombian government with two hundred million dollars in funding for anti-drug trafficking activities.” If this sentence were part of a legal instrument that obligates the U.S. government to provide the funding, the auxiliary “shall” would replace “will,” and the substitution of “by the year 2002” for “within the year 2001” would be an excessive change in wording.

Thus, we can see how translation technique, logic, editing techniques, contextual analysis, a sound-based review, and a conceptual review come together to produce a final translation product.

Here is another example of how translation techniques can be reinforced using a sound-based analysis. Once again, the principle of correlation between phonetic stress and psy-

chological focus will come into play. Here is an example from Spanish into English:

Spanish: *El sistema no dejará de funcionar a causa de una falla que se ha presentado en un sólo lugar.*

Literal Translation into English: “The system will not cease to function on account of a failure that has developed at a single spot.”

Suggested Translation into English: “No single point of failure will cause the system to break down.”

In translating this sentence, I used two translation techniques. First, I structured the sentence around a noun phrase (“single point of failure”), which I employed as the subject of my sentence. This technique was based on an awareness that the English language has a decided preference for the subject-verb type structure and tends to use the subject of the sentence as a focal point for comprehension. Second, I cut the phrase “that has developed” from the sentence. This technique was based on an awareness regarding differences between the use of prepositional phrases in English and Spanish. The English language generously employs adjectival prepositional phrases (e.g., “failure at a single spot,” where the prepositional phrase “at a single spot” modifies the noun “failure”). The Spanish language is less generous in such usage. Formal Spanish writing generally prefers to employ a verb to expressly denote the conceptual connection between the noun and the prepositional phrase, and employs the prepositional phrase as an adverbial: “failure” (noun); “that has developed” (verb phrase); “at a single spot” (prepositional phrase modifying the verb “developed”).

There are many instances where “what sounds good” is not actually good, particularly when it comes to employing correct terminology.

The English sentence in our example has no structural need to use the verb phrase “that has developed.” It also has no conceptual need for the phrase (If there is a failure at some spot, it must have developed somehow.).

Let’s explore how the principle of correspondence between phonetic stress and psychological focus illustrates why these techniques are valid.

Spanish: *El sistema no dejará de funcionar a causa de una falla que se ha presentado en un sólo lugar.*

Literal translation into English: “The **system** will not cease to function on account of a failure that has developed at a single spot.”

My translation into English: “No single point of **failure** will cause the system to break down.”

In the Spanish, the primary stress of the sentence is on the expression *dejará de funcionar* (“cease to function”). In the literal translation, the primary stress is on the word “system,” which does not do much to focus the reader psychologically on the concept of how well or how poorly the system is working. The unnecessary verb phrase “that has developed” also takes a considerable amount of time to read, again reducing the psychological emphasis on what should be the most important word in the sentence (“failure”). In

the “suggested translation” version, “failure” gets decidedly noticeable phonetic stress.

It is worth mentioning that this awareness of the principle of correspondence between phonetic stress and psychological focus does not directly create a “translation technique” under my definition of that term. Indeed, this principle is best applied “in hindsight” to evaluate and determine the fidelity of a translation. A translation that conserves the phonetic stress and thus the psychological focus of a translation is a more faithful translation than one that does not. Awareness of this principle helps the translator understand *why* a sentence sounds good or bad. Being able to voice this principle may even be a powerful tool when it comes to client control.

These considerations are extremely relevant to translators, as our task is not merely to recreate a sentence in the target language that is “grammatically” acceptable. Our task is to recreate a target-language text in the most appropriate and natural style, while conserving the impact and meaning of the original. In my translation classes, I promote what I call the “DO” theory of translation. Our target-language words have to “do” what the source-language words “did” on all levels, both in terms of connotation and denotation, without excluding factors such as emotional impact and psychological focus. Often, this task necessitates quite ➡

a bit of grammatical transformation. Yet, while creativity and approaches that involve major rewordings from one language to another are necessary and positive during the translation process, translators are not free to change whatever we want on a whim. A phonetic analysis of psychological impact can sometimes be the best way to test and demonstrate the fidelity of such transformations.

As noted earlier, phonetic analysis is a method that can be used to create an awareness of the impact of sound on language structures. Phonetics can also influence lexicon choices involving factors such as the length of a word or alliteration. And phonetic analysis of psychological stress can be particularly interesting when the preferred phenomena boldly go to the land of “broken rules.” Clearly, preserving phonetic stress in order to preserve psychological focus is a valid analytical criterion to apply in translation. I have not come across this concept in my own readings on translation theory, which either means that the theory is being introduced into the translation profession through this article or that I should have read more books. Either way, I would encourage it to be incorporated aggressively in training programs and evaluations of the fidelity of translation work.

Using Sound to Facilitate Instinctive Approaches

We would be unrealistic and misguided if we failed to recognize that translators often rely on instinct rather than technique to handle translation challenges. In other words, a translator might translate our sample sentence too literally, review it, realize in horror that it sounds terrible, take a break to let instinct kick in, and then come up with a “brilliant” alternative. Paul Kussmal, in his book *Training the Translator*, has

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researched this process. In his chapter on “Creativity,” he encourages instructors to “train fluency” in the “technique of brainstorming.” His research shows:

In a number of instances, the subjects interrupted the translation process by going to the kitchen to get a bar of chocolate or a drink, by going to the toilet, by putting a new cassette into the tape-recorder, etc., and when they returned to their task they suddenly produced a bright idea.³

It is helpful to point out this reality to aspiring translators. Such a phenomenon explains why it is better for a translator to go to sleep at midnight, get up at 6:00 a.m., re-edit his or her translation, and turn in something good at 9:00 a.m., rather than work straight through to 3:00 a.m., turn in a shaky translation, and come down with mononucleosis. The instinct-based “technique of brainstorming” is a valid component to approaching translation challenges. Creativity in translation is especially important in literary translations, for instance, where translators often employ their own literary devices to conserve the literary impact of a language construction that “goes flat” in the translation. Relying on instinct alone can be an inconsistent, slow process, creating impoverished translators and unsatisfied clients. It needs to be supplemented

with a conscious awareness of contrastive language patterns. Nonetheless, it is important to develop methodologies for facilitating and bolstering instinctive, creative approaches, both for pedagogical purposes and for professional application.

The impact of sound on translation is often sensed instinctively long before it is understood analytically. Professor Pinker’s example demonstrates clearly, for instance, that even accomplished linguists sometimes rely on instinct in order to distinguish the clearer, more natural, more effective version of a phrase. In fact, linguists often use language instincts to generate data, which they then analyze to identify a principle. It is thus worthwhile for translators to incorporate audio techniques that allow for a better application of instinctive approaches in order to improve the style and accuracy of their translations.

I would hypothesize that language instincts work best at the “speed of sound”; in other words, at the pace of normal human speech. This explains why some people can interpret a speech well but translate that same speech quite poorly. If the interpreter has strong language instincts, the speech, coming “at the speed of sound,” is paced in a manner that creates optimal conditions for his or her instincts to “kick in.” The speed of typing or handwriting is too slow, creating obstacles for instinctual responses. I have often seen this phenomenon with professional inter-

preters who study in my translation courses. In a like vein, interpreters tend to complain when speakers underestimate their level of skill and insert long, unnatural pauses between words, which interferes with the interpreter's sense of focus. Translators rely to a much greater extent than interpreters on strong analytical skills. Thus, certain highly skilled translators can work well from several languages into their dominant language. Nonetheless, if the translator's language instincts are weak, he or she may never be able to interpret.

On more than one occasion, I have attended seminars that describe the difference between interpreters and translators as one of personality. "Interpreters are extroverts; translators are introverts." Such an approach is probably being given more weight than it is due, and is more entertaining than helpful when it comes to teaching interpreters how to become better translators or vice-versa. The instinctual versus analytical skills hypothesis seems to hold up better. It explains why persons who were educated in two or more languages in their youth are often strong interpreters and weak translators, while persons with strong academic backgrounds who learned other languages during adulthood can often translate well but have trouble interpreting. Such a hypothesis also sets a roadmap for creating professionals capable of performing well both as translators and as interpreters. While both fields demand training in terminology, specialized concepts, and language comprehension skills, the development of good translation techniques will essentially result from strengthening analytical skills, while the development of good interpreting skills will demand intense, repetitive oral practice with the language combinations to strengthen instinctual capa-

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bilities. As the saying goes, "translators work with their brains; interpreters work with their spinal chords."

When I speak of "using sound to facilitate instinctive approaches" to translation, I simply mean that one of the texts (source or target) should be read out loud. The advantages to such a methodology are numerous. The initial reading process itself, prior to commencing with a translation, is of great help for providing orientation. During the editing process, listening to either the source or target text eliminates the problem of going back and forth with one's eyes between the two texts. It increases focus and concentration, and is an excellent way to catch omissions and meaning errors. Moreover, if one listens to the target text during the editing process, the translator can hear whether the final product "sounds good" or "sounds bad." Run-on sentences, sentences with poorly referenced antecedents, or false parallelism, for example, will tend to sound confusing. The translator will thus be given an instinctive alert that the sentence needs to be reworked.

A variety of "audio techniques" can be used to exploit oral instincts and improve translations. Please note that, although I will refer to these methods as audio "techniques," they are quite different from the "translation techniques" mentioned earlier in this article. Translation technique is a conscious application of translation theory. Audio techniques are primarily geared toward helping the translator exploit semi-conscious, instinctual intelligence.

The degree of success in applying audio techniques is dependent upon the strength of the translator's oral instincts in the language being heard. Though each method has its inherent advantages and disadvantages, in the final analysis, the usefulness of any given method will vary from person to person. At one end of the spectrum, we could consider a translator with a good reading knowledge of a given source language and poor oral fluency. An oral rendition of the source language would be of little use in such a case. Nonetheless, an oral rendition of the target-language text could be quite helpful. At the other end of the spectrum, professional interpreters who have highly developed oral language instincts can benefit immensely from all of the techniques described here. Some of the audio techniques worth mentioning are listed below.

Create a sound file recording of the source text. This method has the advantage of helping the translator process the material semiconsciously before starting to type the translation. As a result, the translator is better oriented. The recording can be played when the first draft of the translation is prepared, mitigating fatigue and improving concentration. Indeed, such a method allows visual input (from the page) to be reinforced with audio input (from the sound file), thus involving a slightly larger portion of the brain in the translation process. The recording can also be used to check the translation against the source text ➡

without having to look away from the target text. This method is especially helpful for training translators. Its prime benefit is that it increases accuracy, since the translator is not likely to make the same mistake or omission when recording a translation as she or he makes when visually reading and typing up the draft translation. The disadvantage of using this method alone is that it does little to contribute to polishing the style of the translated version.

Have someone else record the source text. I sometimes refer to this technique as the “unemployed husband/teenage daughter/retired mom” technique. It is essentially the same as the previous technique, but it does not create the semiconscious orientation that comes with reading the text for yourself. As a result, having someone else record the text saves you less time than you might think, unless the fax and/or handwriting is so illegible that simply deciphering it is a task in and of itself. One advantage to this method is that two people are less likely than one to misread the same text. The reader’s intonation and pace may also add insights to the meaning of the passage.

Read the target text out loud to yourself. This method allows you to hear your translation. Its disadvantage is that it is fatiguing to the voice and takes away from your visual focus on the text. It is a good method to use on an occasional sentence that seems a bit funny, but does not work very well for anything that is too long. In my experience, I have also misread the very word that I wrote incorrectly the first time. This method is also basically useless for comparing the translation to its original.

Have a live body read your translation to you. This method is quite useful as a post-translation audio technique, since it reduces the fatigue factor for the translator or editor and allows for a comparison between the original document and the translation. Nonetheless, it has its disadvantages. In practical terms, no one is going to read the entire text out loud twice. However, the reader is often asked to re-read a sentence or a paragraph, or to “wait a minute” while a correction is being entered on the computer. That makes the “live voice” method much more time consuming for the “support staff” than the “recorder” method. Support staff also tend to be less available at 2:00 a.m. than audio recordings or programs on your computer, tablet, or smartphone. One advantage of this method over almost any other is that the support person can provide additional feedback and ideas as you are working on the editing process. Like other two-person techniques, the reader’s intonation and pace may shed additional light on the text.

Use text-to-speech software. This type of software can be extremely useful to a translator. Text-to-speech software reads the words written on the screen out loud. It is available on most updated computer operating systems and is incorporated into several specialized programs, such as preferred and professional editions of Dragon NaturallySpeaking. My favorite program, “Natural Reader,” has several pleasant voices available in English (U.S. or U.K.), Spanish, French, German, Italian, Portuguese, Swedish, Chinese, Japanese, and Arabic. Prices are in the range of \$40 per voice, and the program provides a surprisingly natural stress pattern for most sentences. Use of this method is a wonderful cure for stilted syntax resulting from overzealous usage of

the find-and-replace function and personalized macros. When translating texts meant for mass publication (especially if they need to make an emotional impact, such as a newspaper editorial or op-ed piece), use of the text-to-speech software makes a huge contribution to the quality of the final product. It is a good idea to read one paragraph at a time and adjust the translation as you go. Another obvious advantage to this method is economic. The voice in the computer is available day and night for a one-time fee (the cost of the software), and it is willing to repeat a phrase as many times as you are willing to hear it, at an adjustable speed. The software also reproduces errors some human readers are likely to inadvertently “correct,” such as an undesirable plural or past tense, or typographical errors. On the other hand, text-to-speech software will not catch homonyms or punctuation errors.

Most of the techniques I just described are not mutually exclusive. On translations that are particularly critical and/or difficult, it might be advisable to use audio file recording prior to starting the translation and during the first draft, and to use text-to-speech software for the editing process. This somewhat redundant, apparently time-consuming approach contributes to very high quality work. Any sort of prep time (including a simple visual reading of the text) almost always pays off in terms of a faster, more efficient translation. I have also found that a visual-to-visual/source-to-target comparison can be very mentally draining and inaccurate. Such a traditional approach often goes no faster than listening to a spoken version of the text.

Though audio techniques are excellent at highlighting problems for the translator or editor, they are less useful

when it comes to figuring out what to do about them. For example, if the direct object is too far from the verb in an English sentence, an untrained ear with sufficient fluency will easily notice that the sentence barely makes sense. Most people need training and/or experience, however, to recognize the problem immediately and casually cut and paste the sentence into a natural sounding word order. Misuse of an article will produce a notably irritating effect and sometimes an almost incomprehensible sentence. An untrained reader will often fail to realize that the article is at fault. Dependent conjunctions will introduce run-on sentences that the translator wants to split in two, but seemingly cannot. The translation technique of using a different conjunction at a later point in the passage is not apparent instinctively to most translators. Instinct alone will usually fail to recognize contrasting use of singular versus plural to express generality, use of the subjunctive in one language to express a conditional event expressed in another language through use of an indefinite article, or other complex comparative structures.

Audio techniques are also less likely to help translators who have developed language interference problems pick up errors that evoke a

weak instinctive response, such as the misuse of prepositions in phrasal verbs. Another obvious problem is that audio techniques will also fail to point out the misuse of specialized terminology for a given field. Thus, audio, instinct-based techniques need to be complemented with analytical techniques, attention to proper usage, and familiarity with the field in question, all of which are needed in order for a translator to produce high quality at high speed and thus meet the demands of the market.

Prepare an Arsenal of Techniques for Better Translation

In conclusion, sound-based methodologies bolster contrastive structural awareness, albeit partially, while facilitating instinctive processes. The development of a true arsenal of translation techniques calls for a combination of methodologies, including intensive exposure to and analysis of written language samples, as well as readings and instruction in translation theory. Audio techniques, both on the analytical and instinctive planes, need to be applied in conjunction with these other fundamental approaches. When used in such a fashion, they can contribute significantly to better speed, accuracy, and quality, and to a deeper

understanding of language theory. There is more to translation than meets the eye!

Notes

1. Orellana, Marina. *La traducción del inglés al castellano* (Editorial Universitaria, 1998). Specifically, look at the section entitled *Uso del sustantivo en vez del verbo*, on pages 169-171.
2. Pinker, Steven. *The Language Instinct* (HarperPerennial, 1995), 374.
3. Kussmaul, Paul. *Training the Translator* (Philadelphia: John Benjamins Publishing Company, 1995), 43.

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