



UNIVERSIDAD DE QUINTANA ROO

División de Ciencias Políticas y Humanidades

English-Spanish translation of the text “The Phonemes of Spanish” with a detailed analysis of the techniques used by the translator

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JORGE RAFAEL MENA FLORES

Asesores

Dra. Edith Hernández Méndez

Dra. Caridad Macola Rojo

Dra. Griselda Murrieta Loyo



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Monografía elaborada bajo la supervisión del comité del programa de Licenciatura y aprobada como requisito para obtener el grado de:

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COMITÉ DE MONOGRAFÍA

Asesor:


Dra. Edith Hernández Méndez

Asesor:


Dra. Caridad Macola Rojo

Asesor:


Dra. Griselda Murrieta Loyo



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1. Introduction

The role of translators is very important in the written or spoken communication since they are the ones who facilitate the understanding of ideas expressed in another language. Translators convey a message from one language to another taking into account cultural, contextual, and linguistic differences. One simple mistake in the context, and the whole translation could end up being a completely different kind of message. Thus, complete commitment and responsibility are some requirements that translators should fulfil.

A good translator should be someone open-minded, curious, and committed. Translators could also be compared to artists like actors, musicians, painters etc. since interpretation is involved.

The act of translating traces back in time when people began to be interested in what surrounded them and they started to question their selves. Translating could be seen as a very useful way of expressing other people's beliefs and ideas, and a road that guides us to multiculturalism and wisdom.

Eugene Nida (1959-1998; p. 12-23) places the beginning of translation with the production of the Septuagint which seems to have been the first translation of the Hebrew Old Testament into Greek. It was carried out by seventy-two translators, and it provides us with the basic categories of the history of this practice. This American scholar states that translation itself was a "science", a theory that was subsequently rejected by others in the second half of the century (Soler Pardo, 2013; p. 4).

In the seventh century, England started to see translation as art just like music, painting and drama and they adopted translation as an artistic way of expressing ideas. The French also got involved and this could be thought as the first steps into the translating world. "Translation was not only an art and a key cultural process, but also a metaphor for salvation and analogue to other acts of understanding" (Steiner, 1975).

1.1 Justification

Translation has become a worldwide tool for globalization and multiculturalism, and nowadays, we can see how translations have helped us for intercultural sharing of ideas which makes us, as socially-intelligent beings, communicate and evolve as humans.

The importance of translation is crucial since the translator has to convey a faithful and accurate message. It is not an easy task, and translators take full responsibility for the content on the message. One example of the importance of an accurate translation could be seen as when translating literal expressions in Spanish-English or vice versa such as “don’t pull my leg” or “hablar sin pelos en la lengua”, which would be completely out of context if they were translated literally, so, the understanding of the language, cultural background and context, are crucial steps a translator should follow in order to express an accurate message.

Nida (2001) claims that accuracy of content should not be judged primarily in terms of “being true” to the author, but in not causing misunderstanding of the message by those for whom the translation is intended.

Segovia (2011) expresses that in Mexico the importance of translation has reached high levels because of two reasons: we have an English-speaking neighbour country and also because Mexico has been recognized widely for the translation quality, especially in literary translation.

The age of translation in Mexico was considered to be in the twentieth century when this ancient form of communication became revolutionary in the field of technology, international relations, cultural exchange, the study of translation as an independent discipline, and the specialization on this as a technical scientific subject. Additionally, the use of translation in social media and its recognition by researchers and specialists who provide us with different approaches is another example of the development of the translation in Mexico (Jansenson, 2002).

It has been observed that there is a need of translation in the academic field. Even though university students have to take some English classes, sometimes these are not enough for their learning in reading and writing original texts in this language. Precisely, this monograph is

presented by the need of Professor Edith Hernandez for having the Spanish translation of this original text in English to include it in her courses.

1.2 Objectives

Considering all above stated, the present monograph is intended to provide a translation of the chapter “The phonemes of Spanish” by Rebeka Campos-Astorkiza from “The Handbook of Hispanic Linguistics. This monograph will provide an example for novice translators of the use of the translations techniques of the Canadian school headed by Jean-Paul Vinay and Jean Darbelnet. The specific objectives of this monograph are to provide an accurate and faithful translation of the chapter afore mentioned, to analyse the translation problems encountered in the process of translating this particular text to reflect on it, and finally to present an analysis of how I used the translation techniques to solve the problems faced so that novice translators can learn from this experience.

The English-Spanish translation of this chapter has been required by the professor Edith Hernandez Mendez as reading material for a specific Spanish-speaking class. Nonetheless, this translated chapter could be also useful for students, teachers and researchers who are interested in the study of Hispanic phonemes or Phonology and Phonetics, in general. This translation could be of benefit for future research as theoretical translators could use it as a source of analysis or it could be useful for academic purposes by using the content as educational material or just as a support for research.

Problems such as polysemy, deceptive cognates, structural problems, idiomatic expressions and metalinguistic obstacles are expected in the translation process of the text. Thus, solutions will be described in the analysis so that readers like novice translators, teachers, students or any person interested in this topic can be benefited not only with the translated text but with a well detailed process of the translation through the presentation of the translation techniques used.

2. The chapter to be translated

The author of the chapter “The Phonemes of Spanish, Rebeka Campos-Astorkiza, is a faculty member in the Department of Spanish and Portuguese at Ohio State University since 2007. She works on phonology and phonetics from a theoretical and experimental perspective. She published a book in 2009 titled “The Role and Representation of Minimal Contrast and the Phonetics-Phonology Interaction” and has published some articles since 2003.

The book titled “The handbook of Hispanic Linguistics” by Jose Ignacio Hualde, Antxon Olarrea and Erin O’Rourke (2012) is a very useful and detailed tool for learning different characteristics of the Spanish language in which different authors share cited ideas and personal opinions. The fifth chapter of this book, which is titled “The phonemes of Spanish” by Rebeka Campos-Astorkiza, is the one to be translated, and this is specifically about the sounds of the diverse dialects of the Spanish language.

Even though some of these authors are Hispanic, this book has not been translated yet, so it is a good opportunity to contribute with the translation of one chapter that will help for the educational development of students from the University of Quintana Roo or anyone interested in these topics.

3. Literature review

Translation could be perceived as the act of translating, but what do we really mean by the word *translation*? According to a paper published by the University of Texas (1991), translation is transferring the meaning of the source language into the target language by going from the form of the first language to the form of a second language by way of the semantic structure.

Indeed, expressing an idea from one language to another considering the semantic and stylistic equivalences can lead to an accurate translation if done correctly. García Yebra (1989) suggests that translating is “*enunciar en otra lengua lo que ha sido enunciado en una lengua fuente, conservando las equivalencias semánticas y estilísticas*”.¹

Newmark (1991) states that translating could be seen as a way of expressing a message from one language to another, of course taking into account the different steps that lead translators to convey an accurate translation. He defines the act of translating very briefly: “It is the act of transferring meaning of a stretch or a unit of language, the whole or a part, from one language to another.”

Translation theories have been developed by different translators like Nida (1969), Newmark (1981), Catford (1965), Wilss (1982), and others, who portray their different beliefs and research about important aspects of the translation in order to make it easier for the translators who want to venture in this journey.

Translation could be seen as an art in which the professional transmits a message that goes beyond borders. These authors cited above have their own point of view of what this art consists of, all of them provide a definition that most suits their style of translating, so these can be understood or taken differently according to styles or personalities or experiences.

In order to translate an accurate message from one language to another, the translator should take into account the source language background so that the message could be as natural as possible

¹ To express in another language what has been expressed in a source language, keeping the semantic and stylistic equivalences.

for the target audience. “Translating consists on reproducing in the receptor language the closest natural equivalent of the source-language message” (Nida and Taber, 1969).

So, we could say that translating is a way of communication, but this way of communication requires expertise in the language and culture involved.

We can say that communication is the key for understanding a language, and in order to provide a translation, we should know the language and the correct way in which this can be communicated, i.e. we should know the cultural background and intended audience so that misunderstanding be avoided. “Translation, like any other use of language, is a matter of communication, i. e. a form of social behaviour which requires a degree of interaction, of cooperation, among those involved” (EST Congress, Snell-Hornby, M., Jettmarová, Z., & Kaindl, K.,1997).

Taking into account all the definitions given by these authors, we can have an idea of what translating is, but, in order to accomplish the goals set, a translation strategy is needed. Therefore, a strategy should be planned and followed so that the process of translating becomes easier by following steps systematically.

The professor and translator Zohre Owji says in an online journal that the word *strategy* can be used in many contexts. In translation studies, many theorists have used the term *translation strategies*, but the point of view can change considerably in the meaning and the perspective from which they look at it.

Zohre Owji shares Chesterman's (1997) list of some general characteristics of translation strategies:

- Translation strategies apply to a process;
- They involve text-manipulation;
- They are goal-oriented;
- They are problem-centered;
- They are applied consciously;
- They are inter-subjective.

A goal is set to be achieved by taking into account the problems the translator may face and has to focus on the intention of the message the author wants to convey. I followed a systematic way of translation, in which a previous reading of the chapter was done to highlight in order of appearance the most difficult ideas. Next, some translations techniques are described.

3.1 Translation techniques

Vinay and Darbelnet (1995) say that the translator may choose from two methods of translating, namely direct or literal translation and oblique translation. Direct or literal translation, as its name suggests, is the direct translation from the source language to the target language, and this could fail when the context totally differs from one to another making no sense in the text, so, certain techniques have to be used to adjust the message.

Another theorist of translation is García Yebra (1989), who defines the process of translation as “*sustitución de unidades de un código por otro.*” García Yebra (2012) claims that “*La regla de oro para toda traducción es decir todo lo que dice el original, no decir nada que el original no diga, y decirlo todo con la corrección y naturalidad que permita la lengua a la que se traduce*” in the prologue of his trilingual edition “*La metafísica de Aristóteles*”.²

Malone (1988) creates the term “*trajection*”, which he defines as “*any of a number of basic translational patterns into which a given source-target pairing may partially be resolved*”. He provides nine trajections such as equation and substitution, divergence and convergence, amplification and reduction, diffusion and condensation and reordering.

During a translation, different techniques are used. Therefore, its definitions and characteristics should be kept in mind so that the process and analysis of the translation can be done accurately.

Moreover, during the process of translation we may face situations in which a cultural idea, for example, is expressed in the source language and cannot be translated literally, so we have to take

² Substitution of units from one code to another.

The golden rule for every translation is to say everything the original text says, not to say anything the original text does not say, and to say everything with the correction and naturalness permitted by the target language.

into account the background of the idea and express it as faithfully as possible for the source language also taking into account cultural aspects of this latter.

“Equivalence of messages ultimately relies upon an identity of situations, and it is this alone that allows us to state that the target language may retain certain characteristics of reality that are unknown to the source language” (Venuti., 2000). Venuti argues (1995) what he calls “foreignizing a language” or “abusive fidelity”, which can be used in any translation strategy that can permit domestication, fluency and transparency. This allows the translation to get some features from the source message which can be applied to the target message so that a cultural change can be expressed.

Indeed, translating requires a certain level of acknowledgment related to the text. However, taking into account the target language background might help in some cases by changing some cultural aspects which can make the text more faithful.

As mentioned previously, the two French scholars Jean-Paul Vinay and Jean Darbelnet proposed seven techniques of translating, which were used as tools for the making and analyzation of this work,

These techniques are divided in two methods, literal translation and oblique translation,

Literal translation techniques include: borrowing, and calque.

1. **Borrowing.** This technique is used when you do not find a suitable translation or when the word doesn't have a translation at all, then you take the word as it is in the source language. For example: **Taco³, tortilla, déjà vu, software.**
2. **Calque.** This technique uses the literal translation at a phrase level. It means that you translate literally the elements that compound the word. For instance: **football – balompié, point of view - point de vue, Milky Way – vía láctea.**
3. **Literal translation.** This is the word-for-word translation respecting the linguistic aspects of the source language. **“I am eating a burger” – “Estoy comiendo una hamburguesa.”**

³ My own examples.

Molina and Hurtado (2002) state that Oblique translation occurs when word for word translation is impossible. Oblique translation techniques include: transposition, modulation, equivalence, adaptation, compensation and others. These are described as:

4. **Transposition.** This technique consists of changing the grammatical category without affecting the meaning of the general idea expressed. “He likes **playing** football” – “A él le gusta **jugar** futbol” (instead of saying “jugando”).
5. **Modulation.** This is a technique in which you basically use a phrase in the source language that is different from the target language but expresses the same idea. “**Te lo regalo**” – “**you can keep it.**”
6. **Equivalence.** This technique is used when you translate something in a very different way. For example, when translating idioms. “**Are you pulling my leg?**” - **¿Me estás tomando el pelo?**
7. **Adaptation.** In this case something different to the source language culture is expressed adequately to the target language culture. This is more common in movies’ titles such as: **Mi villano favorito – Despicable me, El viaje de Chihiro – Spirited Away, La noche del demonio – Insidious.**
8. **Compensation.** This can be used when something cannot be translated from source language to target language, and the meaning that is lost in the immediate translation is expressed somewhere else in the translation technique. This translation technique is related to the nuances of formality like in Spanish “tú” y “usted” while in English they only have “you”.

These techniques were used in the present translation. The arising difficulties were analysed considering the techniques used to make a more accurate translation.

4. Method

In order to precisely achieve the goals set for this monograph, there was a process which was followed step by step. The first activity I engaged in was reading books and articles in Spanish related to the topic; it was helpful to become familiar with the specialized lexicon and the author's writing style. Reading other papers written by the author of the chapter to be translated was also necessary to learn about her own writing style and also other books from one of the authors in order to understand vocabulary, like "Los sonidos del español" by Jose Ignacio Hualde, and "The Role and Representation of Minimal Contrast and the Phonetics-phonology interaction" by Rebeka Campos-Astorkiza.

For a translator, internet is one of the most useful tools since we are able to search and look for books, dictionaries, encyclopaedias and other distinctive written tools available there. Nowadays we have easy access to different resources on the internet, mostly translation websites and online dictionaries, which were very useful for the translation process. Some of the resources I found useful for the translation process were the following:

Google translator. This is one of the most used translators available on internet. However, I strongly recommend this tool only when looking for a single word because when you try to translate a complete idea or paragraph, most of the times you get a bad literal translation of the sentence or paragraph with no order and broken meaning.

The free dictionary. As its name indicates, this is a free online dictionary, encyclopaedia and thesaurus which provide different well-organized definitions for the word you are looking for. Words' definitions can be found in different languages.

Linguee. This is a dictionary in which translations of different kinds in many languages can be found just by typing a word or phrase. References are given for each translation found.

The Oxford English dictionary. This is one of the different online dictionaries published by Oxford. This dictionary provides meanings and examples of any word or phrase and you can choose from different languages, and British or American English. Furthermore, you can choose

other options such as synonyms and grammar in which you will obtain the information you request.

Word reference. An online dictionary which provides translations and definitions of words in many languages such as English, Italian, Romanian, Spanish, French, Korean, and so on. The website also provides links to forums in which the word or phrase you are looking for is used.

Pocket dictionary. A printed Español-Inglés/English-Spanish dictionary with plenty of definitions, synonyms, and examples of alphabetically-ordered words.

The search and use of these tools was constant during the whole process of translation as well as the advice provided by the monograph supervisors. Scheduled sessions every week with the main supervisor were necessary to revise the translation, to keep record of the techniques used, to discuss problems and doubts about the translation. Moreover, to assure an accurate translation, a linguist specialized in the topic was also consulted.

Once the article was translated completely, the text was read by my supervisors, an expert in the topic, and by the students of a Linguistics class; all of them provided feedback, which was very useful to attain the purpose of offering an accurate and faithful translation, and to analyse the problems I encountered in the process.

The process of the translation analysis was done by revising, page by page, the most common and difficult mistakes I made when translating, and how after the feedback provided by the supervisors, the experts and the readers, I came up with a better translation using different translation techniques.

5. Translated chapter

5. Los fonemas del español

Rebeka Campos-Astorkiza

1. Introducción

En este capítulo se describen los fonemas del español, con un enfoque en su distribución. Se les otorga especial atención a algunas de las principales variantes dialectales en el mundo de habla hispana. Los vocoides del español (vocales, deslizadas) se discuten primero en la sección dos, seguidos por los fonemas consonánticos en la sección tres, los cuales se clasifican por su modo de articulación. En la sección cuatro se discute el estatus de algunos de los contrastes cuasi-fonémicos en el español. En la sección cinco se concluye con algunas sugerencias para futuras investigaciones considerando hallazgos recientes. Este capítulo se enfoca en presentar descripciones tradicionales del inventario de sonidos del español junto con algunos de los desarrollos más recientes en el campo de la fonología experimental del español, mismos que han arrojado luz sobre cuestiones ya establecidas respecto a los fonemas del español y su realización.

2. Los vocoides

2.1 Las vocales

Las vocales se producen con la cavidad vocal relativamente abierta, de manera que el aire fluye libremente, sin presentar ningún obstáculo; ésta es la principal diferencia articuladora entre las vocales y las consonantes. También, las vocales se caracterizan por una vibración vocal por defecto. Las diversas cualidades de las vocales resultan de las diferencias en la configuración del tracto vocal durante la producción del habla, es decir, de las diferentes formas y posiciones de la lengua y de los labios, las cuales dan lugar a los términos articulatorios usados en la clasificación de las vocales: altura, posterioridad de la lengua, y redondeamiento de los labios. Se debe tomar en cuenta que estas descripciones articulatorias tienen correlatos acústicos, que se describen como diferencias en las frecuencias de resonancia de las vocales, que dependen de la forma y tamaño del tracto vocal (para una descripción acústica de las vocales en español, véase Quilis

1993). El español tiene un inventario de cinco vocales (Tabla 5.1) y solo contrastan los rasgos de altura y posterioridad, dado que el redondeamiento es predecible por la posterioridad.

Tabla 5.1 Inventario vocálico del español

	Anterior	Central	Posterior
Alta	i		u
Media	e		o
Baja		a	
	No redondeadas		redondeadas

Navarro Tomás (1997) afirma que las vocales medias /e, o/ tienen variantes abiertas (es decir, variantes más bajas) cuando están en contacto con [r], antes de [x], en una sílaba cerrada con cualquier consonante. Esto no sucede con /e/, que no es abierta si la sílaba es cerrada por [m, n, s, d, θ] y en diptongos crecientes con una deslizada palatal. Sin embargo, estudios instrumentales basados en información acústica no han podido proporcionar evidencia que respalde esta afirmación, y concluyen que no hay diferencias sistemáticas en el grado de apertura de las vocales medias (Monroy 1980; Martínez Celdrán 1984a; 288-301; Morrison 2004). Un interesante estudio de la alofonía de vocales medias en el español es el que realizaron Martínez Celdrán y Fernández Planas (2007), quienes analizan información acústica y articulatoria para probar la hipótesis de que las vocales medias son abiertas o cerradas dependiendo del contexto fonético. De acuerdo con resultados anteriores, sus análisis acústicos indican que no hay una apertura sistemática. Por otra parte, los datos articulatorios muestran una diferencia importante en la apertura de acuerdo con los contextos mencionados por Navarro Tomás. A partir de estos resultados, los autores concluyen que en español sí existe la distinción alofónica entre vocales medias abiertas y cerradas, aunque no se manifieste en el análisis acústico, posiblemente por la relación no lineal entre articulación y acústica (Martínez Celdrán y Fernández Planas 2007: 188).

La nasalización no es contrastiva en las vocales del español, aunque algunas descripciones indican que las vocales pueden ser parcialmente nasalizadas en contacto con consonantes nasales (Navarro Tomás 1997: 39; Hualde 2005: 123; Piñeros 2006: 161). Para ser más precisos, de acuerdo con Navarro Tomás (1977: 39), las vocales entre dos consonantes nasales y las vocales en posición inicial de palabra seguidas por una consonante nasal, son sometidas al más alto grado

de nasalización. Resulta interesante que en algunos dialectos caribeños y andaluces, se puede encontrar elisión de la nasal en posición final de palabra con la nasalización de la vocal precedente (por ejemplo: pan ['pãŋ]~['pã], tapón [ta'põŋ]~[ta'põ]) (Terrell 1975; Vaquero 1996; Hualde 2005: 123). En estos casos, la nasalización alofónica de una vocal puede comprenderse como el surgimiento de un papel contrastivo debido a la pérdida del contexto condicionante (es decir, la consonante nasal).

Aunque el sistema vocálico del español se ha descrito como bastante estable en los diferentes dialectos (Quilis y Esgueva 1983; Morrison y Escudero 2007), hay situaciones en las que las vocales del español demuestran algún grado de variación en su realización. Se ha encontrado que la variación en las vocales se origina en situaciones de contacto lingüístico. Por ejemplo, Guion (2003) identificó que los hablantes bilingües del español-quechua en Ecuador usaban un sistema vocálico reducido, y Willis (2005) encontró cierta variación de las vocales en el español del suroeste de los Estados Unidos en comparación con el español mexicano. O'Rourke (2010) encontró diferencias vocálicas entre los hablantes de Lima y los de Cuzco, estos últimos habitan en un contexto de contacto intenso con el quechua. Además, el autor encontró que los hablantes de Cuzco muestran diferentes patrones vocálicos dependiendo del conocimiento que tengan del quechua, de modo que los hablantes nativos bilingües de español-quechua mostraban un espacio vocálico más reducido que los monolingües de español. En situaciones de no contacto, las vocales medias átonas parecen ser más propensas a la variación. La elevación de las vocales medias en posición final de palabra se ha documentado en el español del occidente de Puerto Rico (por ejemplo, Navarro Tomás 1974 [1948]; Holmquist 1998, 2001; Oliver 2007; véase Capítulo 1 para la elevación de vocales medias en variedades peninsulares). El estudio de Willis (2008) del sistema vocálico del español dominicano muestra que las vocales medias presentan mucha variación y tienden a sobreponerse vocales altas contiguas.

Un proceso que afecta las vocales medias y que ha recibido mucha atención en la literatura, es la reducción de vocales átonas (por ejemplo, acortamiento, ensordecimiento y elisión perceptual de vocales en posiciones átonas). Este proceso es característico del español mexicano y del andino, y ha sido documentado de manera impresionista en estudios como los de Lope Blanch (1963), Canellada y Zamora (1960), y Perissinotto (1975) en el español mexicano y Hundley (1983) y Lipski (1990) en el español andino. Estos estudios coinciden en que el proceso es graduado y

variable, que se presenta principalmente en vocales medias, especialmente la /e/, que ocurre frecuentemente en vocales que preceden a una coda /s/ al final de palabra, y que ocurre con mayor frecuencia en el habla rápida. En un intento por definir acústicamente el proceso, Delforge (2008) presenta datos acústicos, cuantitativos, con respecto a la reducción vocálica en el habla espontánea en Cuzco, Perú; este autor encontró que la realización más común de la reducción vocálica es el ensordecimiento completo, y el menos frecuente es la elisión aparente. Delforge observó que la reducción no resulta en la centralización de la vocal sino en el ensordecimiento de esta, lo que sugiere que la reducción no tiene ningún efecto relevante en la calidad de la vocal. Los datos muestran que mientras que /e/, al interior de palabra, y las vocales altas tienen los índices más altos de ensordecimiento, en las sílabas finales de palabras que terminan en /s/ y en sílabas abiertas antes de pausa, todas las vocales muestran altos índices de ensordecimiento. Adicionalmente, el ensordecimiento es fuertemente favorecido por una /s/ contigua, pero las vocales reducidas también aparecen antes o después de otras consonantes sordas (incluyendo la /ʃ/ asibilada). Además la posición de la palabra afecta el proceso, de modo que el ensordecimiento es más común al final de una palabra que en cualquier otra posición. Debe tenerse en cuenta que en los datos de Delforge, el ensordecimiento vocálico no parece depender del habla.

(1) Ejemplos de reducción de vocales átonas en el español andino (Delforge, 2008):

Cusqueña [kus'keɲa] (marca de cerveza)

Viajes ['bjaxɛs]

Casi todo ['kasi'toðo]

Alpakas [al'pakas]

Estos ['estos]

A partir de sus resultados, Delforge (2008) analiza la reducción de vocales átonas en el español andino dentro del Marco de la Fonología Articulatoria (Browman and Goldstein, 1989) y argumenta que el proceso se origina por los diferentes grados de superposición gestual entre las consonantes y las vocales en el español andino. Por otra parte, Lipski (1990), quien trabaja en un marco autosegmental, representa la elisión de la vocal átona como resultado de la pérdida consonántica de la representación característica de la vocal debido a la elisión fonética y

ensordecimiento. Tanto Delforge (2008) como Lipski (1990), argumentan que la /e/ es la vocal que generalmente se ensordece por su rasgo coronal, característica que comparte con la /s/, causa más común del ensordecimiento. Argumentan que esta similitud articulatoria entre la /e/ y la /s/ favorece la interacción entre estos dos sonidos lo que conlleva a índices más altos de ensordecimiento.

2.2 Deslizadas

El español tiene una deslizada alta anterior o palatal y una deslizada alta posterior o labiovelar. Las deslizadas ocurren en combinaciones de vocoides tautosilábicos y difieren de las vocales en que éstas no son silábicas; pueden ocurrir en diptongos crecientes (es decir, una deslizada [j, w] seguida por una vocal nuclear como en miel ['mjel] y cuatro ['kwa.tro]), o en diptongos decrecientes (una vocal nuclear seguida por una deslizada [i̯, u̯] como en veinte ['be̯i̯n.te] y caucho ['kau̯.tʃo]). En el primer caso, a las deslizadas se les conoce como semiconsonantes y, en el segundo caso, como semivocales. Es de resaltar que los símbolos fonéticos usados para representar estas deslizadas en español tienden a reflejar esta dicotomía, aunque no todos los estudios siguen el uso de estos símbolos (véase Hualde 2005). En ocasiones, las deslizadas medias [ɛ̯, ɔ̯] pueden ocurrir en el habla coloquial como resultado de la reducción de un hiato a diptongo, por ejemplo, cohete ['kɔ̯e.te] y línea ['li̯.nɛ̯a] (Navarro Tomás 1977: 160). En algunas áreas, estas secuencias pueden ser aún más reducidas dando lugar a formas como ['kwe.te] y ['li̯.nja]. Este proceso de elevación vocálica y diptongación se ha reportado en el español latinoamericano y peninsular (véase, entre otros, Moreno de Alba 1994; Jenkins 1999; Hualde y Prieto 2002; Face y Alvord 2004; Alba 2006; Garrido 2007; Hernández 2009). El estatus fonémico de las deslizadas en el español se discute más adelante en la sección 4.1.

3. Fonemas consonánticos

Los sonidos consonánticos se producen con algún grado de constricción en el tracto vocal. Se usan tres parámetros articulatorios para clasificar las consonantes: lugar de articulación, modo de articulación, y estado de las cuerdas vocales. La tabla 5.2 muestra el inventario consonántico del español organizado de acuerdo con estos tres parámetros. Como se discute más adelante, algunos de estos sonidos no se presentan en todos los dialectos del español.

Tabla 5.2 Inventario consonántico del español

	Bilabiales		Labiodentales		Interdentales		Dentales		Alveolares		Alveopalatales		palatales		Velares	
	Sorda	sonora	sorda	sonora	sorda	sonora	sorda	sonora	sorda	sonora	sorda	sonora	sorda	sonora	sorda	Sonora
Oclusivas	P	B					t	d						ʃ	k	g
Fricativas			F		θ				s						x	
Africadas											tʃ					
Nasales		M								ɲ				ɲ		
Laterales										l				ʎ		
Vibrante simple										r						
Vibrante multiple										r						

3.1 Obstruyentes

3.1.1 Oclusivas. Las consonantes orales oclusivas o explosivas se caracterizan por una completa interrupción del flujo de aire. Una completa oclusión del tracto vocal es seguida por una liberación, la cual se puede acompañar de una explosión mientras el aire sale rápidamente. El español se conforma por una serie de oclusivas sordas /p, t, k/ y otra de oclusivas sonoras /b, d, g/; la diferencia entre éstas reside en su lugar de articulación, bilabiales, dentales, y velares, respectivamente. Las oclusivas sonoras del español son generalmente sonorizadas a lo largo de la oclusión (a diferencia de las del inglés que tienden a no tener sonorización completa en ciertos contextos). En algunos contextos, la sonorización puede ser parcial durante la oclusión, pero siempre empieza antes de la liberación del aire. Las consonantes explosivas sordas carecen de aspiración, esto es, la liberación de la oclusión ocurre al mismo tiempo o un poco antes de la sonorización de la siguiente vocal (para saber más sobre el tiempo de inicio de la sonoridad (VOT) de las explosivas del español, véase Abramson y Lisker 1973; Williams 1977; Castañeda Vicente 1986).

Después de las continuas (es decir, vocoides y consonantes continuas), las oclusivas sonoras no se producen con una completa oclusión sino más bien con alguna aproximación de los articuladores (para más detalles véase obstruyentes sonoras en el capítulo 6). Estos alófonos continuos, representados como [β, ð, γ], se caracterizan por una corriente de aire ininterrumpida, con un grado variable de constricción dependiendo del contexto, del estilo, de la velocidad del

habla, y del dialecto. Algunos autores los caracterizan como fonéticamente aproximantes (por ejemplo, Martínez Celdrán 1984b, 1991, 2004).

Las oclusivas sordas se realizan como sonoras en ciertas variantes dialectales, principalmente del español cubano (Ruiz Hernández y Mirayes 1984; Quilis 1993: 222-224) y del español de las Islas Canarias (Trujillo 1980; Oftedal 1985, Marrero 1988). La sonorización de las oclusivas sordas también se ha documentado en diferentes variedades peninsulares (por ejemplo, Torreblanca 1976 en Toledo, Machuca Ayuso 1977 en Barcelona, Lewis 2001 en Bilbao, y Martínez Celdrán 2009 en Murcia). La sonorización puede ocurrir en posición inicial o interna de una palabra, y puede estar sujeta a restricciones estilísticas (cf. Martínez Celdrán 2008). La evidencia espectrográfica de varios estudios nos muestra que este proceso de debilitamiento es gradual y que las realizaciones resultantes pueden variar de sonorización parcial a pronunciación lenificada con mayor o menor constricción (Torreblanca 1976; Oftedal 1985; Machuca Ayuso 1997; Lewis 2001; Martínez Celdrán 2009). Los ejemplos en (2) ilustran este punto. Se debe tener en cuenta que, en algunas variantes dialectales, no ocurre este proceso de debilitamiento, como es el caso del español colombiano (Lewis 2001) y del argentino (Colantoni y Marinescu 2010).

(2) Sonorización de oclusivas sordas (de Quilis 1993)

Ortografía estándar dialectos sonorizantes

Campana	[kam'pana]	[kam'bana]
Pizarra	[pi'sara]	[bi'sara]
Tacón	[ta'kon]	[ta'yon]
Cuatro	['kwatro]	['kwaðro] ~ ['kwaɸro]

El contraste en sonorización entre las oclusivas generalmente se neutraliza en posición de coda por lo que las oclusivas en esta posición se distinguen solo por su lugar de articulación. La realización de las explosivas en este contexto puede ir desde una oclusiva sorda en pronunciaciones enfáticas hasta una aproximante sonora o no continua, en un estilo más neutral o conversacional, con otras posibles realizaciones intermedias (Navarro Tomás 1977; Hualde 2005: 146). La producción precisa de estos sonidos incluye diferentes grados de constricción y sonorización dependiendo del estilo y del entorno fonético. Por ejemplo, se ha documentado que

la tonicidad es un factor relevante, y que la neutralización es más probable en sílabas átonas (Navarro Tomás 1977: 77). Los ejemplos en (3) muestran la ortografía estándar y algunas de las posibles producciones de las palabras que contienen una coda oclusiva. Se debe tener en cuenta que las posibles pronunciaciones de los pares ortográficos p-b, t-d, y k-g en coda, son exactamente las mismas, lo que ilustra la pérdida de contraste en ese contexto.

(3) Neutralización de sonorización en oclusivas en posición de coda

Ortografía	Producciones variables
Apto	[ˈapto ~ ˈaβto ~ ˈabto ~ ˈaβto]
Absoluto	[apsoˈluto ~ aβsoˈluto ~ absoˈluto ~ ˈaβsoˈluto]
Atmósfera	[atˈmosfera ~ aɖmosˈfera ~ admosˈfera ~ [aɔ̃mosˈfera]
Admitir	[atmiˈtir ~ aɖmiˈtir ~ admiˈtir ~ [aɔ̃miˈtir]
Doctor	[dokˈtor ~ doɖˈtor ~ dogˈtor ~ doɣˈtor]
Dogma	[ˈdokma ~ ˈdoɖma ~ ˈdogma ~ ˈdoɣma]

Esta neutralización de sonorización se refleja en el léxico español, el cual no explota el contraste de sonorización en oclusivas en posición de coda, es decir, no existen palabras que solo difieran en la sonorización de sus oclusivas en la coda (Quilis 1993: 204). Nótese que esto solo es relevante en codas al interior de la palabra, ya que al final de palabra, solo la /d/ ocurre en palabras del español (hay algunas excepciones que incluyen principalmente préstamos, por ejemplo, déficit, club, etc).

Quilis (1993: 205) plantea tres archifonemas /B, D, G/ para las oclusivas en posición de coda. Estos archifonemas contrastan en sonorización y su realización fonética varía según los factores antes mencionados. El análisis archifonémico de Quilis mantiene cierto parecido a un enfoque de neutralización, según el cual las oclusivas en la coda serían subespecificadas por el rasgo del estado de la glotis, que resulta en una realización variable de sonoridad.

Las evidencias de neutralización son un poco diferentes en algunos dialectos del castellano. En estas variedades, la /g/ en posición de coda tiende a pronunciarse como una [x] fricativa velar sorda (por ejemplo, *ignorante* [ixno'rante], *pragmático* [prax'matiko]). Esto resulta en la preservación del contraste entre la /k/ y la /g/ en posición de coda, por ejemplo, en ítems como *doctor* [doɣ'tor] vs. *dogma* ['dokma] (Hualde 2005:148). En la misma región dialectal, la coda /d/ a veces se pronuncia como una [θ] fricativa (inter)dental sorda (por ejemplo, *red* ['reθ], *verdad* ['berðaθ]), lo cual conlleva a la neutralización entre la coda /d/ y la /θ/ (González 2002, 2006).

La vocalización de las oclusivas en posición de coda también resulta en la neutralización del contraste de sonorización. Este tipo de vocalización sucede en algunos dialectos en los que las oclusivas sordas y sonoras en posición final de sílaba se realizan como deslizadas. Quilis (1993: 220) indica que la vocalización es más común en obstruyentes labiales y velares, dado que las deslizadas del español comparten más propiedades con éstas que con las obstruyentes dentales. Datos de la vocalización del español chileno muestran que las /p, b/ se vocalizan como [w], y /t, d/ como [j], y la /k, g/, como [w] o [j], dependiendo del dialecto (véase ejemplos en (4)) (Lenz 1940; Oroz 1966 citado en Martínez-Gil 1997). La vocalización se puede ver como otro proceso de debilitamiento de las oclusivas en posición de coda.

(4) Vocalización de las oclusivas en posición de coda en el español chileno

Ortografía	Estándar	Dialecto chileno
Apto	/'apto/	['awto]
Objeto	/ob'xeto/	[ow'xeto]
Étnico	/'etniko/	['ejniko]
Admirar	/admi'rar/	[ajmi'rar]
Doctor	/dok'tor/	[doj'tor] ~ [dow'tor]
Dogma	/'dogma/	['dojma] ~ ['dowma]

Un caso extremo de neutralización de oclusivas en posición de coda se realiza en dialectos caribeños, en los que las codas explosivas tienden a ser sujetas a neutralización no solo de sonorización sino también de su lugar de articulación. En estos casos, cualquier explosiva en posición final de sílaba puede ser realizada como consonante velar u oclusiva glotal. Esto se

puede ver en la pronunciación coloquial caribeña de las palabras *admitir* [aʝmi'tir], *submarino* [sukma'riño], y *étnico* ['eʎniko], que en una pronunciación más estándar serían [aðmi'tir], [suβma'riño], y ['eðniko] (Guitart 1976: 23; Zamora y Guitart 1982:109). Morgan (2010: 197) indica que este tipo de neutralización de lugar en codas explosivas se ha extendido más de lo hasta ahora reportado, y que se puede encontrar en otras variantes dialectales, además del caribeño.

Las oclusivas en posición de coda están, a menudo, sujetas a elisión en el español peninsular, incluso en el discurso de hablantes cultos, se han identificado realizaciones como *obsesión* [ose'sjon] vs [oβse'sjon], *taxi* ['tasi] vs ['taɣsi]. La elisión de las codas explosivas también sucede en el español latinoamericano, pero en menor medida, ya que está más limitada a áreas rurales.

3.2.1 Africadas y fricativas. Las consonantes fricativas se caracterizan por un flujo continuo de la corriente del aire a través de un estrechamiento en el tracto vocal. Esta configuración articulatoria resulta en un sonido de fricación, que es la principal característica acústica de este grupo de sonidos. Las fricativas del español incluyen /f, θ, s, x/. El fonema /f/ se encuentra solo en posición inicial y se realiza de manera más frecuente como una fricativa labiodental (por ejemplo, *farola* [fa'rola], *sofá* [so'fa]). Sin embargo, hay reportes de que, en dialectos caribeños, este fonema se puede realizar como una fricativa bilabial sorda [ɸ], especialmente antes del diptongo [we] (por ejemplo, *afuera* [a.ɸwe.ra]) (Jiménez Sabater 1975; Vaquero 1996). La fricativa alveolar sorda /s/ puede articularse principalmente de dos maneras dependiendo del dialecto. En el español castellano tiene una producción apicoalveolar, y el español de Andalucía, de las Islas Canarias y de Latino América tiene una realización predorso o laminoalveolar (véase Quilis 1993: 248-251 para otras realizaciones menos comunes).

La /s/ al final de sílaba o palabra está sujeta a debilitamiento en muchos dialectos del español, lo que resulta en aspiración o pérdida de este segmento (véase estudios citados más adelante, y entre otros, Terrell 1979, 1986; Alba 1982; Lipski 1984, 1985; Amastae 1989; Carvalho 2006; File-Muriel 2009; véase también el capítulo 6 para una mayor discusión del debilitamiento de la /s/ y su interacción con otros fenómenos segmentales). El proceso de debilitamiento de la /s/ se puede encontrar en variedades peninsulares del sur y en el español de las Islas Canarias. Este fenómeno también se ha extendido en Latinoamérica, con excepción del altiplano central de México y Guatemala, Costa Rica central y la región andina. (Lipski 1994; Hualde 2005: 161). El grado y

frecuencia de debilitamiento de la /s/ y su resultado fonético varía en los diferentes dialectos (Terrell 1977, 1979; Bybee 2000; Torreira 2006), hay variedades caribeñas que aparentemente muestran el mayor rango de aspiración y elisión (Bybee 2000; Hualde 2006:161). El proceso de debilitamiento de la /s/ también está sujeto a mucha variación debido a otros factores sociales y lingüísticos. El estilo y estatus socioeconómico se han identificado como condicionantes del grado de debilitamiento, con altos porcentajes en estilos casuales y entre hablantes menos educados (Lipski 1985, Alba 2004). El debilitamiento es más frecuente en algunos contextos fonológicos que en otros (Bybee 2000; Hualde 2005: 161-163): la posición preconsonántica, ya sea en posición al interior de palabra o entre palabras, es el contexto que más favorece el debilitamiento (por ejemplo, *este* ['eh.te] ~ ['e.te], *las camas* [lah 'ka.mah] ~ [la 'ka.mah]), seguida por la posición antes de pausa (por ejemplo, *vamos* ['ba.moh]). El contexto con la menor frecuencia de debilitamiento de la /s/ es antes de una vocal (por ejemplo, *las olas* [lah 'o.lah]), aunque hay algunos dialectos, por ejemplo, el del español de Nuevo México en el que la vocal precedente a /s/ está sujeta a altos porcentajes de aspiración, incluso al inicio de una palabra (por ejemplo, *la semana* [la he.'ma.na]) (Brown y Torres 2002; Brown 2005).

La fricativa interdental /θ/ se encuentra solo en algunos dialectos, principalmente en el centro y norte de España, los cuales muestran una distinción fonémica entre la /s/ y la /θ/ (por ejemplo, *casa* ['kasa] vs. *caza* ['kaθa]). La mayoría de las variantes dialectales, incluyendo las de Andalucía, Islas Canarias, y la mayor parte de Latinoamérica, carecen del fonema interdental fricativo /θ/, que en estos dialectos corresponde a la /s/ (por ejemplo, *casa* ['kasa] vs. *caza* ['kasa]). A esto se le llama *seseo*. Un número menor de dialectos no muestran un contraste entre estos dos fonemas, pero el sonido que tienen es de una fricativa dental muy similar a la /θ/. A esto se le llama *ceceo* y se puede encontrar en Andalucía oriental y en algunas partes de América Central.

La fricativa velar sorda /x/ está sujeta a mucha variación dialectal. Las principales realizaciones son [x, χ, h, ç]. En el español castellano, la /x/ se realiza de manera más retraída, frecuentemente descrita como uvular [χ], especialmente cuando es seguida de una vocal posterior (por ejemplo, *junta* ['χunta], *ajo* ['aχo]) (Navarro Tomas 1977:142; Hualde 2005: 154). En Andalucía, Islas Canarias, el Caribe, y América Central, la /x/ se pronuncia como una /h/ glotal (por ejemplo, *caja* ['kaha] y *gente* ['hente]). En el español chileno, cuando la /x/ precede a una vocal anterior /i/ o /e/,

tiene una articulación anterior, que se produce como la fricativa palatal [ç] (por ejemplo, compare *gente* ['çente] y *gira* ['çira] con *jarrón* [xa'ron]) (Lipski 1994: 201; Hualde 2005: 155). La realización velar de la /x/ se encuentra en el resto de los dialectos (es decir, en México y en la mayor parte de Sudamérica).

Las africadas se caracterizan por dos fases de articulación. Empiezan con una oclusión completa, seguida rápidamente por una ligera apertura del tracto vocal, por el cual el aire sale causando una fricción. El español tiene un fonema africado /ʎ/, una alveopalatal sorda que ocurre solo en posición inicial de sílaba (por ejemplo, *pecho* ['pe.ʎo], *chico* ['tʃi.ko]). En algunos dialectos, la afrizada sorda se realiza como una fricativa prepalatal sorda /ʃ/ (por ejemplo, *cacho* ['kaʃo], *chino* ['tʃino]). Esto puede verse como un ejemplo de debilitamiento articulatorio, por el cual la afrizada pierde su fase de oclusión, pero conserva la liberación de la fricación. Estas variantes fricativas se pueden encontrar en el norte de México, la República Dominicana, Puerto Rico, Cuba, Chile, y Andalucía. Las formas ortográficas *ll*, *y*, y *hi* representan una obstruyente palatal sonora /j/ cuando son seguidas por una vocal no alta, cuya pronunciación está sujeta a mucha variación. Su grado de constricción puede variar dependiendo del contexto, estilo, velocidad del habla, y dialecto, que va de una oclusiva a una aproximante (véase Aguilar 1997). La continua palatal sonora [j] a menudo se presenta después de una vocal o de una consonante continua (por ejemplo, en la palabra *maya* ['maja], *la llave* [la 'jaβe], *la hierba* [la 'jerβa]). Hay una tendencia a realizar este sonido palatal como una afrizada sonora o [j] explosiva cuando se presenta después de una consonante nasal o lateral, o después de una pausa. Sin embargo, las producciones africadas se encuentran con frecuencia en posición intervocálica en variedades del español mexicano y caribeño (Jiménez Sabater 1975: 108-110; Lope Blanch 1989, 1996; Martín Butragueño (en imprenta)). Además, en ciertas áreas dialectales, principalmente en Nuevo México y el norte de México, la obstruyente palatal tiene una pronunciación muy débil y puede ser elidida entre la /i/ o la /e/ y otra vocal (por ejemplo, *anillo* [a'nio], *cabello* [ka'βeo]) (Canfield 1981: 80; Lipski 1990; Alvar 1996). El estatus fonémico de [j] ~ [ʎ] se discute más adelante en la sección 4.2.

El español argentino ha desarrollado una pronunciación diferente de [j] ~ [ʎ]. En esta variedad, encontramos una fricativa prepalatal sorda o sonora [ç ~ ʃ] en contextos donde la obstruyente palatal se usa en otros dialectos (por ejemplo, *maya* ['maça], *llave* ['ʒaβe]), pero nótese que la forma ortográfica *hi* no está sujeta a este desarrollo y se pronuncia como en otras variedades (por

ejemplo, *hierba* ['jerβa] vs. *yerba* ['zerβa]). Se conoce este tipo de pronunciación como žeismo o rehilamiento. La variante sorda parece ser un fenómeno reciente y esta desonorización es más común entre las generaciones más jóvenes, las mujeres y los miembros de la clase media (Wolf and Jiménez 1979; Guitarte 1955; Lipski 1994: 170).

3.2 Resonantes

3.2.1 Nasaes. Las consonantes nasales se producen con un cierre oral y el descenso del velo, lo que permite que el aire fluya por la cavidad nasal. Existen tres fonemas nasales en el español, /m, n, ɲ/, que se contrastan por su lugar de articulación (es decir, bilabial, alveolar, y palatal, respectivamente). En cuanto a su distribución, las tres nasales se pueden encontrar a la mitad de una palabra y en posición inicial, dando lugar a grupos mínimos como *cama* /'kama/ vs. *cana* /'kana/ vs. *caña* /'kaɲa/. En posición inicial de palabra, la nasal palatal ocurre de manera muy limitada, principalmente en préstamos de lenguas indígenas (por ejemplo, *ñame* /'ɲame/) y en algunas palabras de origen leonés, puesto que el leonés palataliza la /n/ inicial (por ejemplo, *ñublado* [ɲu'βlaðo]) (Hualde 2005: 173-174). Hay neutralización en posición de coda y las nasales se asimilan al lugar de articulación de la siguiente consonante (véase asimilación nasal en el capítulo 6). Ambas, la /m/ y la /n/, pueden ocurrir en posición final de palabra, aunque la /m/ está limitada a unos cuantos préstamos (por ejemplo, *álbum álbum*, y en estos casos se tiende a pronunciarla como [n]. Sin embargo, nótese que una nasal en posición final de palabra se realiza como la bilabial [m] en algunas variedades del español colombiano y yucateco. En algunas variedades del español latinoamericano y peninsular, una nasal en posición final de palabra, antes de una pausa, se realiza como una velar [ŋ]. La velarización de nasales en posición final se acompaña frecuentemente por la nasalización de una vocal precedente (por ejemplo, *pan* ['pãŋ], *corazón* [kora'sõŋ]). Este fenómeno se puede encontrar extensamente a través del mundo de habla hispana, incluyendo el Caribe, la costa pacífica de Sudamérica, las Islas Canarias, y las regiones españolas de Asturias, Galicia, León, Extremadura, y Andalucía (véase, entre otros, Alonso et al. 1950; Malmberg 1965: 3; Zamora Vicente 1967: 416; Jiménez Sabater 1965: 116-119; López Morales 1980; Quillis y Graell 1992, Quillis 1993: 239-242).

3.2.2 Líquidas: laterales y róticas. El término líquido incluye sonidos laterales y róticos que, tienden a aparecer juntos. Por ejemplo, estos sonidos comparten propiedades de distribución similares en el español: solo una lateral o una rótica puede aparecer después de otra consonante en un inicio o arranque silábico complejo (véase capítulo 7). (Más adelante se discutirán todos los tipos de líquidas).

Las laterales se producen al crear un cierre en algún momento en la parte media del tracto vocal y dejando los lados de la lengua abiertos (ambos o solo un lado dependiendo del hablante), lo cual deja el aire escapar por esas aberturas. El español tiene principalmente un fonema lateral alveolar sonoro /l/, que puede aparecer en cualquier posición silábica (por ejemplo, *lago* ['layo], *ala* ['a.la], *claro* ['kla.ro], *mal* ['mal]). En posiciones de coda, la /l/ se asimila en el lugar de articulación a una consonante siguiente articulada con la parte anterior de la lengua (es decir, no en labiales o velares; véase asimilación lateral en el capítulo 6).

Algunos dialectos tienen un segundo fonema lateral, a saber, la lateral palatal /ʎ/. Se puede encontrar principalmente en el habla de personas mayores en el norte y centro de España, en el norte de Argentina, Paraguay, y en la región andina (Canfield 1981: 6-7; Hualde 2005: 180). Este sonido que solo ocurre en posición inicial corresponde a la *ll* ortográfica y contrasta con la /j/, que corresponde a la *y* ortográfica. La mayoría de los dialectos carece de esta distinción ya que solo tienen el fonema palatal obstruyente. A este fenómeno se le llama *yeísmo*, en el cual la /ʎ/ se combina con la obstruyente /j/, y las distinciones léxicas basadas en el contraste entre /ʎ/ vs. /j/ se pierden; véase ejemplo en (5). Por otra parte, en dialectos con *lleísmo* existe un contraste entre /ʎ/ y /j/ lo cual origina contrastes léxicos. Los ejemplos en (5) ilustran estos dos fenómenos.

(5) Ortografía	dialectos yeístas	dialectos lleístas
Haya	['aja]	['aja]
Halla	['aja]	['aʎa]
Cayó	[ka'jo]	[ka'jo]
Calló	[ka'jo]	[ka'ʎo]

El español también tiene dos róticas, una /r/ vibrante simple, y una /r/ vibrante múltiple. Ambas son alveolares; la punta de la lengua y el borde alveolar son los articuladores activos y pasivos respectivamente. Cada rótica involucra un mecanismo diferente de producción: la vibrante simple

consiste en una sola oclusión alveolar, mientras que la vibrante múltiple se produce con varias oclusiones rápidas. Sin embargo, la vibrante múltiple no es solamente una serie de vibrantes simples dado que la configuración articulatoria necesaria difiere de la que se requiere para la vibrante simple (cfr. Harris 1983: 67-68). Las vibrantes múltiples requieren más tensión muscular (Navarro Tomás 1977: 122-123) y una mayor precisión articulatoria (Recasens 1991). De hecho, las vibrantes múltiples en español implican el efecto Bernoulli para su producción; es decir que oclusiones rápidas resultan de las condiciones aerodinámicas creadas en el tracto vocal, mientras que las vibrantes simples se producen con un solo movimiento voluntario de la punta de la lengua (Martínez Celdrán y Fernández Planas 2007: 149-151).

Las dos róticas del español contrastan entre sí solo en posición intervocálica de una palabra. En este contexto encontramos pares mínimos como *perro* /'pe.ro/ vs. *pero* /'pe.ro/, *carro* /'ka.ro/ vs. *caro* /'ka.ro/. En posición inicial de palabra y después de una consonante heterosilábica, solamente la /r/ ocurre (por ejemplo, *broma* ['broma], *centro* ['sentro]). En arranques silábicos complejos solamente /r/ es posible (por ejemplo, *rosa* ['rosa], *sonrisa* [son.'ri.sa]). En posición de coda hay variación. Cuando la que sigue es una vocal y ocurre la resilabificación, solamente encontraremos la /r/. Por otro lado, si no hay resilabificación debido a que la siguiente es una consonante o una pausa, entonces puede ocurrir la simple o la vibrante, aunque la realización más común es la simple. La vibrante múltiple generalmente se limita a producciones enfáticas, aunque en algunos dialectos hay preferencia por las realizaciones de la vibrante múltiple en posición de coda en general (y también de róticas en grupos consonánticos al inicio, Alonso 1945; Hualde 2005: 182).

Las róticas no siempre se producen con un cierre completo. Se pueden encontrar variantes continuas que van de realizaciones fricativas a aproximantes dependiendo del grado de constricción (Blecua 2001; Martínez Celdrán y Fernández Planas 2007: 157). Estas pronunciaciones podrían ocurrir en cualquier posición y tienen más probabilidad de aparecer en el estilo conversacional. Además, las róticas están sujetas a una diversidad de realizaciones no normativas dependiendo del dialecto. La asibilación de las róticas se presenta en un número de áreas geográficas que incluyen la región andina, partes de México y América Central, Paraguay y el norte de Argentina (por ejemplo, Arguello 1978; Lipski 1994; Moreno de Alba; Bradley 2004; Serrano 2006; Lastra y Martín Butragueño 2006). Estas variantes continuas generalmente son

sonoras, aunque también existen casos de sordas y muestran fricación en sus frecuencias altas, lo que les otorga una calidad de sonido estridente (Quilis y Carril 1971). Dentro de la tradición dialectológica del español, el símbolo [ř] se usa para representar róticas asibiladas. Pueden ocurrir en diferentes contextos, dependiendo del estilo y dialecto (por ejemplo, *verde* ['beřde], *carro* ['kařo]; véase Bradley 1999, 2004 para un análisis articulatorio de la asibilación del español ecuatoriano). La asibilación también afecta al grupo consonántico /tr/, el cual se pronuncia como una africada ensordecida [tř]. Esta variante se encuentra en Chile, Costa Rica, Ecuador y en la región de La Rioja, España (Quilis 1993: 352-354).

Las realizaciones velares o dorsales de las róticas se encuentran en distintas variedades caribeñas, especialmente en el español de Puerto Rico. Estas variantes dorsales se articulan con el posdorso de la lengua y van de una fricativa velar [x] a una rótica uvular [R]. Pueden ser sordas o sonoras (por ejemplo, *rico* ['xiko] ~ ['riko], *corro* ['koxo] ~ ['koro]) (Vaquero y Quilis 1984; Quilis 1993: 350-351). En los dialectos caribeños, también se pueden encontrar realizaciones pre aspiradas de vibrantes múltiples. Estas variantes se producen con una fricción faríngea seguida de una vibrante simple o múltiple y están sujetas a un grado de ensordecimiento (Quilis 1993: 351-352; Hualde 2005: 187).

El símbolo [hr] se usa para representar estos sonidos pre aspirados (por ejemplo, *tierra* ['tjhera], *Ramón* [hra'mon]). Willis (2006, 2007) presenta datos espectrográficos del español dominicano que muestran que estas realizaciones róticas pre aspiradas se caracterizan más por ser roncas y argumenta el uso de los símbolos del AFI (IPA por sus siglas en inglés) [fir] o [fr] dependiendo del número de vibrantes simples que siguen a la parte ronca.

3.2.3 Neutralización de las líquidas. La neutralización de las líquidas en posición de coda se registra en varios dialectos, en los que la diferencia entre una lateral y una rótica se pierde, y carecen de distinciones léxicas basadas en este contraste (por ejemplo, *mar* ['mar] vs. *mal* ['mal]). El sonido resultante varía dependiendo de la región, incluso en el mismo hablante (Hualde 2005: 188). En algunos dialectos, la coda /l/ se pronuncia como rótica y se puede encontrar en las Islas Canarias (Marrero 1988), Andalucía (Quilis-Sanz 1998) y, en menor medida, en Puerto Rico y en algunas regiones de la República Dominicana (Quilis 1993 325-326). Otras variedades neutralizan en una lateral (es decir, las róticas en posición de coda se realizan como /l/). A este fenómeno

se le conoce como *lambdacismo* y ha sido documentado en Cuba, República Dominicana, y Puerto Rico. Se ha notado que el *lambdacismo* es más frecuente en posición final de palabra y no es favorecido antes de una consonante nasal (Quilis 1993: 356). En el español puertorriqueño, el resultado del *lambdacismo* se ha descrito de manera impresionista como un sonido intermedio entre una rótica y una lateral (por ejemplo, Navarro Tomás 1948: 76; Hualde 2005: 188). Reciente trabajo experimental caracteriza a este sonido como un aproximante y muestra que es diferente de /l/ en sus características acústicas, para ser más específicos, en las trayectorias de los formantes y la duración, aunque las diferencias acústicas precisas varían entre los hablantes (Paz 2005; Simonet et al. 2008). Además, Paz (2005) muestra que los hablantes puertorriqueños pueden percibir la diferencia entre la coda léxica /l/ y /r/, incluso en casos donde se supone que la diferencia ha sido neutralizada, mientras que hablantes de otras variedades, a saber, del español argentino, tienen dificultades para percibir la diferencia. A partir de estos resultados, Simonet et al. (2008) concluyen que la neutralización líquida en el español puertorriqueño es incompleta y menos común que lo reportado hasta ahora.

La vocalización de las róticas y laterales en posición de coda es común en los niveles socioeconómicos más bajos en la región dominicana de El Cibao (Jiménez Sabater 1975: 90-105; Alba 1990). En esta variedad, las líquidas en posición de coda se realizan como una deslizada palatal [j]. También, algunos dialectos eliden líquidas en posición de coda con o sin geminación de la siguiente consonante (véase asimilación total de líquidas en el capítulo 6).

(6) Ortografía	estándar	rotacismo	lambdacismo	vocalización
Algo	[ˈalɣo]	[ˈarɣo]	[ˈalɣo]	[ˈajɣo]
Aquel	[aˈkel]	[aˈker]	[aˈkel]	[aˈkej]
Porque	[ˈporke]	[ˈporke]	[ˈpolke]	[ˈpojke]
Comer	[koˈmer]	[koˈmer]	[koˈmel]	[koˈmej]

4. Contrastes cuasi-fonémicos

4.1 Deslizadas vs. vocales altas

Muchos estudios analizan las deslizadas como alófonos de las vocales altas en vez de fonemas independientes (Navarro Tomás 1977; Alarcos 1965; Quilis y Fernández 1985; Hualde 2005). Esto se basa en la observación de que las vocales altas se realizan como deslizadas cuando son átonas y aparecen al lado de otra vocal diferente (por ejemplo, *cuento* ['kwento], *pienso* ['pjensɔ], *veinte* ['beĩnte]. Por consiguiente, las deslizadas y las vocales altas parecen estar en distribución complementaria. Sin embargo, en algunos dialectos parecen existir pares mínimos cercanos que se basan en un contraste entre deslizadas y vocales altas (Aguilar 1999; Hualde y Prieto 2002; Hualde 2004). En estas palabras, encontramos vocales altas átonas al lado de otras vocales en donde normalmente se encontraría una deslizada. Los ejemplos en (7) incluyen algunos de estos pares en donde la palabra de la columna de la izquierda tiene una vocal alta átona excepcional.

(7) a. vocal alta excepcional	b. Deslizada esperada
Dueto [du.'e.to]	duelo ['dwe.lo]
Huida [u.'i.ða]	cuida ['kuj.ða]
Pie [pi.'e]	pie ['pje]

Algunos autores argumentan que las palabras como las de (7a) se deben marcar lexicalmente como excepcionales sin postular una categoría fonémica para deslizadas (por ejemplo, Hualde 1997; Harris y Kaisse 1999). Sin embargo, Hualde (2004) presenta evidencia de que estas palabras excepcionales no se manifiestan al azar, ya que hay algunos factores que explican qué posiciones muestran la silabificación excepcional. Argumenta que hay un contraste entre las deslizadas y las vocales altas, pero este se limita a ciertas posiciones donde se aplica la silabificación excepcional; véase también Martínez Celdrán (1989: 78-84, 93-96) para una amplia discusión de las deslizadas como una categoría fonémica diferente).

Evidencia adicional en contra del análisis de las deslizadas como alófonos de las vocales altas proviene de contrastes como *cambia* ['kam.bja] vs. *varía* [ba.'ri.a]. Los verbos del español en la forma del presente indicativo siempre se acentúan en la penúltima sílaba. En consecuencia, algunos autores arguyen que el contraste entre verbos como *cambiar* y *variar* es el resultado de una distinción subyacente entre vocales altas y deslizadas (Harris 1969: 122-125, 1983, 1989).

Sin embargo, otros análisis sostienen que la diferencia entre estos verbos se origina por el contraste entre vocales altas especificadas de manera subyacente como nucleares (por ejemplo, en *varía*) y vocales altas sin ninguna especificación silábica (por ejemplo, en *cambia*). Bajo esta perspectiva, no hay necesidad de suponer una distinción fonémica entre vocales altas y deslizadas (Cressey 1978: 78-79; Roca 1997; véase también Hualde 1997 para una mayor discusión).

Estatus fonémico de [j ~ j]

Existen dos posiciones principales con respecto al estatus fonémico del sonido /j/ en el español. Por un lado, este sonido se puede ver como un alófono de la vocal alta /i/. Esta perspectiva se basa en el análisis de la /j/ como resultado del fortalecimiento de la deslizada [j] en posición inicial de sílaba. Por otro lado, la /j/ se puede tratar como un fonema consonántico independiente. La evidencia de este análisis proviene de dos fuentes, a saber, de pares mínimos que para algunos hablantes dependen del contraste de la /j/ y la /j/, y de palabras que carecen del fortalecimiento de la [j]. Algunos pares mínimos (cercanos) que muestran un contraste entre [j] y [j] se ilustran en (8).

(8) Pares mínimos que muestran el contraste de [j] vs. [j]

Desierto [de. 'sjer.to] vs. Deshielo [des.'je.lo]

Abierto [a.'bjer.to] vs. Abyecto [ab.'jek.to]

Defensores del análisis alofónico de la [j] argumentan que estos pares mínimos se pueden explicar considerando la relación entre división silábica y morfología (por ejemplo, Hualde 1997).

Las palabras en la columna de la derecha contienen un prefijo, el cual requiere un linde silábico justo después de éste, para que la [j] ocupe aun posición inicial de sílaba y de esta manera ocurre el fortalecimiento.

En cuanto al segundo argumento del estatus fonémico de /j/ (es decir, palabras que no muestran fortalecimiento de la /j/), Hualde (2004) reporta que los hablantes cultos tienden a evitar el fortalecimiento inicial de palabras que comienzan con la forma ortográfica *hie*, (por ejemplo, *hiena*) (véase también Navarro Tomás 1977). En estos casos, los hablantes cultos no favorecen

una pronunciación no continua, en contraste con palabras que empiezan con la *ll* y *y* ortográficas, para las que un amplio rango de grados de constricción es posible, lo que incluye realizaciones oclusivas. Algunos ejemplos del español castellano, de Hualde (2004), ilustran esto en (9), donde podemos ver que el rango de pronunciaciones de la vocal alta /i/, la deslizada palatal /j/ y la obstruyente palatal /j/ coincide parcialmente (los símbolos se han modificado; Hualde usa [i̠] para las deslizadas palatales). Podemos hablar entonces de un contraste cuasi fonológico inducido por la ortografía (véase Hualde 2004 para una mayor discusión).

(9) Rango de posibles pronunciaciones en español castellano

Hiato [i.'a] ~ ['ja]

Hiena [i.'e] ~ ['je]

Yema [i.'e] ~ ['je] ~ ['je]

5. Conclusiones

Este capítulo ofrece un resumen general de los fonemas del español y sus principales variantes dialectales, así como referencias para los desarrollos más recientes en el estudio del sistema fonológico del español (véase capítulo 6 para más procesos fonológicos). Uno de los principales avances en años recientes es el uso de laboratorio o enfoques experimentales para el análisis de la fonología y fonética del español. A partir de anteriores descripciones impresionistas, y sin duda valiosas, del lenguaje, los investigadores han proporcionado una idea más precisa y detallada de los sonidos del español y su variación a través del mundo de habla hispana usando datos acústicos y articulatorios. Además, las nuevas metodologías experimentales nos permiten integrar resultados de diferentes sub ramas, por ejemplo, desde la sociolingüística, el aprendizaje de lenguas y desde la psicolingüística el estudio de la producción del habla y la percepción.

Algunas de las áreas que se han beneficiado considerablemente de los enfoques de laboratorio en años recientes incluyen el estudio del inventario de sonidos del español en situaciones de contacto, como el español en contacto con lenguas indígenas en América Latina, con el inglés en Estados Unidos y con otras lenguas romances y el vasco en la península ibérica. En este capítulo, se mencionaron algunos de los problemas explorados recientemente en relación al contacto con la lengua, incluyendo el sistema vocálico y la aspiración de la /s/. La variación rótica inter e intra

dialectal es otra área que ha llamado mucho la atención en años recientes, especialmente desde una perspectiva experimental. Varios estudios (véase los citados previamente en la sección 2.2.2) han presentado evidencia que indica que la producción de las róticas está sujeta a más variación que lo reportado en estudios previos. De hecho, en algunos dialectos, las realizaciones innovadoras, como las róticas asibiladas, parecen estar en proceso de reemplazar producciones canónicas. Esta reconfiguración del sistema tiene consecuencias para el análisis fonémico de las róticas que necesitan ser exploradas. Datos empíricos recientes también desafían los análisis tradicionales de la neutralización del español mostrando que estas neutralizaciones en realidad son incompletas, como vimos en la neutralización líquida en el español puertorriqueño en la sección 3.2.3. En vista de estos resultados con respecto a la neutralización incompleta, la supuesta neutralización sonora de las oclusivas del español en posición de coda está en duda. Técnicas instrumentales podrían ayudar a resolver la duda y arrojar luz en el área de la fonología del español en la que se ha reportado mucha variación, pero en la que las realizaciones exactas de codas oclusivas y su distribución aún no son claras.

Reconocimientos

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6. Analysis of the techniques used for the translation

Throughout the reading of the text to be translated, I came across many concepts that can be found difficult to understand for people who are not familiar with the topic. Even though the text is about a well-known topic, which is the phonemes of Spanish, i.e., the sounds of words in the Spanish language, the specialized and technical vocabulary and the type of register in which the text was written made this text a little complicated when translating.

In this chapter, we will see the different problems encountered throughout the translation divided into two parts: lexical problems and syntactic problems, each one with a brief explanation of the techniques used and how the problem was solved.

Most of the difficulties found were lexical problems of technical terms, as I was not sure which Spanish word was the best to select according to the register and style of the text. In order to achieve a more accurate translation, it was necessary to read some papers of the same author and similar texts in Spanish. Furthermore, the support and advice from an expert in Linguistics was helpful in order to attain a faithful text.

One example of a lexical problem can be noticed in the word *backness*, in the following sentence:

“Spanish has a five vowel inventory (Table 5.1) and makes contrastive use of the height and backness features, given that rounding is predictable from backness.” (Page 89).

The word *backness* was translated in Spanish as *velaridad* since it was a word that could suit in this kind of topic, but could be also translated as *posterioridad*, which resulted as the most accurate translation according to the expert.

Moreover, syntactic problems were also found in the chapter, which were usually changes from passive voice into active voice, like in the following example:

“Raising of mid vowels in word-final position has been documented for western Puerto Rican Spanish.” (Page 91).

First version: *“La elevación de las vocales medias al final de una palabra en el español de occidente de Puerto Rico han sido documentadas.”*

Final version: *“La elevación de las vocales medias en posición final de palabra se ha documentado en el español de occidente de Puerto Rico.”*

The first version was translated literally as a passive voice sentence, except for the gerund, but in the final version the sentence was modified into an impersonal active voice.

These kinds of sentences were the most common problems found in the text, besides technical terms, but only a few were chosen for the translation analysis. Next, examples of lexical problems are analysed first followed by syntactic ones.

6.1 Lexical problems

The following is an example of a lexical problem:

“Hualde presents evidence that these exceptional words are not random since there are some factors that explain what positions show exceptional syllabification.”

First, the sentence was translated literally from English into Spanish.

First version: *“Hualde presenta evidencia de que estas palabras excepcionales no son azarosas, ya que hay algunos factores que explican qué posiciones muestran la silabificación excepcional.”*

Then, there was a change in the phrase “no son azarosas” which was modified into “no se manifiestan al azar”.

Final version: *“Hualde presenta evidencia de que estas palabras excepcionales no se manifiestan al azar, ya que hay algunos factores que explican qué posiciones muestran la silabificación excepcional.”*

In this case, the use of modulation was necessary to modify noun “not random”, which was finally translated as “no se manifiestan al azar” changing from a noun into a nominal phrase taking into account the frequency of use.

There were neologisms for me, which made the translation process a little bit more difficult and confusing. Here is an example of a lexical problem of technical terms.

“Spanish has a five vowel inventory (Table 5.1) and makes contrastive use of the height and backness features, given that rounding is predictable from backness.” (Page 89).

Here we can notice the use of literal translation for the first version.

First version: *“El español tiene un inventario de 5 vocales (Tabla 5.1) y hace uso contrastivo solo de las características de altura y velaridad, dado que el redondeo es predecible de la velaridad.”*

Then, the use of modulation was carried out since technical terms like “rounding”, “features” and “backness” could be translated as “redondeamiento”, “rasgos” and “posterioridad” which are more accurate for this kind of text according to the expert.

Final version: *“El español tiene un inventario de cinco vocales (Tabla 5.1) y hace uso contrastivo solo de los rasgos de altura y posterioridad, dado que el redondeamiento es predecible por la posterioridad.”*

The final version was modified taking into account the frequency of use of these terms.

The use of literal translation was very often used in the first versions, but for the final versions, the use of other techniques like transposition and modulation were necessary in order to obtain a more accurate translation. The following is an example of another lexical problem:

“This chapter describes the phonemes of Spanish...” (Page 89)

Here we can notice a literal translation word for word.

First version: *“Este capítulo describe los fonemas del español...”*

However, for the final version there is a change in the verb which was modified from “describe” to “se describen” using transposition.

Final version: *“En este capítulo se describen los fonemas del español...”*

In this case, the verb “describe” had to be modified into passive voice reflex, according to the frequency of use.

Furthermore, the translation of adverbs was something that I found troublesome since there are some adverbs in Spanish that are not frequently used, like this example in the following passage:

“Occasionally, mid glides [ɣ, ɔ] may occur in colloquial speech as a result of reducing a hiatus to a diphthong...” (page 92).

First, the sentence was translated literally with the use of modulation for words like “glides” and “speech”.

First version: *“Ocasionalmente, las deslizadas medias [ɣ, ɔ] pueden tener lugar en el habla coloquial como resultado de reducir un hiato a diptongo...”*

Then, a change was done in the adverb “occasionally” using transposition.

Final version: *“En ocasiones, las deslizadas medias [ɣ, ɔ] pueden tener lugar en el habla coloquial como resultado de la reducción de un hiato a diptongo...”*

There was a change from an adverb to a nominal phrase. In this case, “ocasionalmente” was modified into “en ocasiones” because of the frequency of use in Spanish.

The following is another example of a lexical problem:

“...Spanish mid vowels /e, o/ have open variants, when they are in contact with [r], before [x], in a syllable closed by any consonant, except /e/, which does not open if the syllable is closed by [m, n, s, d, θ]...” (Page 90).

First, we can notice a literal translation.

First version: *“...las vocales medias /e, o/ tienen variantes abiertas cuando están en contacto con [r], antes de [x], en una sílaba cerrada con cualquier consonante, excepto por /e/, la cual no es abierta si la sílaba es cerrada por [m, n, s, d, θ]...”*

Then, a change was done in the prepositional phrase “excepto por” using transposition.

Final version: *“...las vocales medias /e, o/ tienen variantes abiertas cuando están en contacto con [r], antes de [x], en una sílaba cerrada con cualquier consonante. Esto no sucede con /e/, que no es abierta si la sílaba es cerrada por [m, n, s, d, θ]...”*

The last sentence of the passage was modified from “excepto por /e/” into the nominal sentence “esto no sucede con /e/” taking into account the frequency of use and the style.

The following is another lexical problem.

“It should be noted that some dialects, namely Colombian and Argentine Spanish do not participate in this weakening process.” (Page 94)

For the first version, modulation was used for the adverb “namely” and literal translation was used for the rest of the passage in order to keep the sense of the idea.

First version: *“Se debe tener en cuenta que, en algunos dialectos, para ser más específicos, el español colombiano y el argentino, no participan en este proceso de debilitamiento.”*

Then, for the last version, there was a change using modulation in which the adverb “namely” was modified from “para ser más específicos” to “como es el caso de” making it a subordinate adverbial sentence and the order of the sentence was modified as well.

Final version: *“Se debe tener en cuenta que en algunos dialectos no ocurre este proceso de debilitamiento, como es el caso del español colombiano y argentino.”*

The final version was done taking into account the frequency of use.

Here we can see another example of a lexical problem:

“Based on these results, the authors conclude that the allophonic distinctions between open and close mid vowels exists in Spanish.” (Page 90).

First we can notice a literal translation.

First version: *“Basados en estos resultados, los autores deducen que la distinción alofónica entre vocales medias abiertas y cerradas existe en el español.”*

But, for the final version there was a change in the order of the sentence and the word “conclude” that was more accurate translated literally as “concluyen”.

Final version: *“Basándose en estos resultados, los autores concluyen que en español sí existe la distinción alofónica entre vocales medias abiertas y cerradas.”*

For this final version, the frequency of use of the term “concluyen” was considered.

This is the last example of a lexical problem.

“...although /m/ is limited to a handful of borrowings...” (Page 98-99)

First, the use of literal translation was used for the noun “handful” and the rest of the sentence.

First version: “...*Aunque la /m/ está limitada a un puñado de préstamos...*”

However, it was modified into “unos cuantos” using modulation.

Final version: “...*Aunque la /m/ está limitada a unos cuantos préstamos...*”

The change in “a handful”, as it was literally translated to “un puñado”, was modified into a more simple and understandable way, so it was changed to “unos cuantos” taking into account the formal register of the text.

6.2 *Syntactic problems*

The following examples show syntactic problems, and the techniques used to solve them.

One example is the next passage, which was changed using transposition, changing from a passive voice to an impersonal sentence in Spanish, which is more frequent than the regular passive voice.

“It should be noted that these articulatory descriptions have acoustic correlates, which are described as differences in vowels’ resonance frequencies...” (Page 89).

Firstly, the passage was translated using transposition.

First version: “*Se debe tomar en cuenta que estas descripciones articulatorias tienen correlaciones acústicas, las cuales son descritas como diferencias en las frecuencias de resonancia de las vocales...*”

As mentioned in pages above, the use of passive voice is not common in Spanish, so there was a change for the final version.

Final version: “*Se debe tomar en cuenta que estas descripciones articulatorias tienen correlatos acústicos, que se describen como diferencias en las frecuencias de resonancia de las vocales...*”

The use of transposition was necessary because of the frequency of use of the impersonal sentences in Spanish. We can notice that the technical term “correlation” was also modified taking into account the advice of the expert.

Another example of a syntactic problem is shown in the following sentence:

“...high vowels have the highest rates of devoicing, in word-final syllable closed by /s/...” (Page 91)

Here we can see a literal translation in the first version.

First version: *“...las vocales altas tienen los índices más altos de ensordecimiento, en las sílabas finales de palabra terminada con /s/...”*

Then, there was a change in the final sentence which was modified from the adjective “terminada” into the relative clause “que terminan” for the final version.

Final version: *“...las vocales altas tienen los índices más altos de ensordecimiento, en las sílabas finales de palabras que terminan en /s/...”*

This change was made taking into account the frequency of use in Spanish.

Next, another example of a syntactic problem:

“Raising of mid vowels in word-final position has been documented for western Puerto Rican Spanish.” (Page 91).

As in the examples above, literal translations were common for the first versions. **First version:** *“La elevación de las vocales medias al final de una palabra en el español de occidente de Puerto Rico han sido documentadas.”*

Even though there is a change in the order of the sentence, the passive voice was translated literally. For the final version, the order of the sentence remained, but the passive voice was changed.

Final version: *“La elevación de las vocales medias en posición final de palabra se ha documentado en el español de occidente de Puerto Rico.”*

Sentences in passive voice do not allow a suitable and clear idea when translated literally. Therefore, the use of modulation had to be used for the frequency of use in Spanish by changing it to a reflex passive sentence, which changed from “han sido documentadas” to “se ha documentado” also taking into account that the verb has to agree with subject.

The following is another example of a syntactic problem:

– “...vowel variation has been found in situations of language contact”. (Page 90)

Here we can see a literal translation with no major changes.

First version: “...la variación en las vocales se ha encontrado en situaciones de contacto lingüístico.”

Then, the sentence was modified using transposition by changing the order of the sentence, but keeping the passive reflex voice.

Final version: “...se ha encontrado que la variación de las vocales se origina en situaciones de contacto lingüístico.”

This change was made because of the frequency of use of this kind of structure in Spanish.

Another example of a syntactic problem can be noticed in the following passage:

“In the former case, glides are referred to as semiconsonants and in the latter, as semivowels.” (Page 92).

First, we can notice the use of transposition for the phrase “in the former case” and modulation in the passive voice “are referred to as” and the adjective “latter” thinking of providing a clear idea.

First version: “En el primer ejemplo, las deslizadas son tomadas en cuenta como semiconsonantes, y en el segundo como semivocales.”

However, there were some adjustments in the phrases using literal translation for the opening phrase “in the former case” and modulation for “latter” and the passive voice mentioned before which changed into “se les conoce como”

Final version: “En el primer caso, a las deslizadas se les conoce como semiconsonantes, y en el segundo caso como semivocales.”

As described in the examples above, passive voice is not common in Spanish. Therefore, changes from passive voice to an impersonal sentence are common when translating English-Spanish because of the frequency of use of this structure.

Finally, one more example of a syntactic problem is shown.

“We tend to find allophonic realization of this palatal sound as a voiced affricate or plosive [j] when it occurs after a lateral or nasal consonant after a pause.” (Page 98).

First, a literal translation was made. However, the verb “occurs” changed by the use of modulation.

First version: *“Tendemos a encontrar realizaciones alofónicas de este sonido palatal como una africada sonora o [j] explosiva cuando se presenta en una consonante nasal o lateral o después de una pausa.”*

Then, a change in the sentence “we tend to” was done using modulation, which ended up as the sentence with the use of an existential verb “hay una tendencia de”.

Final version: *“Hay una tendencia de realizaciones alofónicas de este sonido palatal como una africada sonora o [j] explosiva cuando se presenta después de una consonante nasal o lateral, o después de una pausa.”*

This final change was made taking into account the frequency of use in Spanish

The errors I basically faced through the translation were single words like technical terms, adverbs or prepositions and phrases. However, after rereading the sentences or phrases several times, the flaws started to appear which helped me to modify them in a more accurate way also taking into account the guidance of an expert.

Some techniques used were changed for more suitable ones after feedback was provided by the supervisors, the expert in Linguistics and the readers of the translated text.

To end up, the process of doing this translation analysis helped me to understand the importance of dedication needed in this art and the importance of providing a faithful idea of what is being translated that can be helpful in the future for other academic purposes. Furthermore, I acquired new vocabulary from both languages which made it interesting from the very first day of translating.

7. Conclusions and recommendations

When translating the chapter, I faced some challenges, mainly in relation to a lack of vocabulary in this specific topic, but the more I read the chapter and other similar papers, the more vocabulary I learned, and it was really helpful since there was a number of words repeated in different passages which I learned very easily. Most of the problems found in the text were mainly technical terms I did not know or I was unaware they had a different meaning and some other lexical problems. Moreover, syntactic problems were found, like sentences in passive voice that had to be modified into active voice or impersonal sentences or passive reflex sentences, which were the most common, and some changes in the grammatical category of words and phrases.

Indeed, translating is not an easy job if you are not trained or taught well enough in the field. Although the text included completely new information for me, by reading related texts from the same author(s), it became a little easier to understand what the author conveyed in the text.

I really felt confident when translating since the translation courses I took in the English language degree trained me to use the translation techniques required. However, I think the BA program in English should encompass broader translation-related topics and more practice in more real settings. It would be great to have a master's degree in translation at the University of Quintana Roo because there is a huge need for translation in the state and the country.

Thus, having the necessary tools and the required level of English and knowledge of the different techniques, and, of course, the curiosity and determination could be enough for someone who expects accuracy and a well translated text. Moreover, as a translator, knowledge about the source language is paramount. People interested in becoming a translator in Mexico should learn more about the Spanish structural system and the Spanish spelling and punctuation systems. Also, lexicon should be increased so that the translation could be more faithful and less difficult.

For this translation, it was required the support from experts who provided valuable feedback to improve the final version of the translation. Therefore, I highly recommend to source to experts when dealing with academic or technical texts.

This translation is expected to contribute to increase the bulk of translated academic texts which will ease the transference of knowledge and can be useful for future translators, teachers and students, or any person who would like to use the text for academic purposes.

I would also recommend translation students or novice translators, or any person interested in translation in Mexico that they read or take Spanish courses so that they can improve their syntax, orthography, punctuation and different genres, which are very important when translating. Even though we are native speakers of the Spanish language, we may have a poor vocabulary. Reading and searching texts related to the topic of the text to be translated may improve your writing and vocabulary considerably.

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9. Appendix

Table 5.1 Spanish vowel inventory.

	<i>Front</i>	<i>Central</i>	<i>Back</i>
High	i		u
Mid	e		o
Low		a	
	unrounded		rounded

Navarro Tomás (1977) claims that the Spanish mid vowels /e, o/ have open variants (i.e., lower variants), when they are in contact with [r], before [x], in a syllable closed by any consonant, except /e/, which does not open if the syllable is closed by [m, n, s, d, θ], and in rising diphthongs with a palatal glide. However, instrumental studies based on acoustic data have failed to provide evidence supporting this claim and conclude that there are no systematic distinctions in degree of openness for the mid vowels (e.g., Monroy 1980; Martínez Celdrán 1984a: 288–301; Morrison 2004). An interesting study of the Spanish mid-vowel allophony is presented in Martínez Celdrán and Fernández Planas (2007), where the authors analyze acoustic and articulatory data to test the hypothesis that mid vowels are open or close depending on the phonetic context. In line with previous findings, results from their acoustic analysis indicate that there is no systematic openness. On the other hand, the articulatory data show that there is a significant difference in openness according to the contexts mentioned by Navarro Tomás. Based on these results, the authors conclude that the allophonic distinction between open and close mid vowels exists in Spanish, although it is not manifested in the acoustic analysis, possibly due to the nonlinear relationship between articulation and acoustics (Martínez Celdrán and Fernández Planas 2007: 188).

Nasalization is not contrastive among Spanish vowels, although some descriptions note that vowels can be partially nasalized in contact with nasal consonants (Navarro Tomás 1977: 39; Hualde 2005: 123; Piñeros 2006: 161). More precisely, according to Navarro Tomás (1977: 39), vowels between two nasal consonants and vowels in word-initial position followed by a nasal consonant are subject to the highest degree of nasalization. Interestingly, in some Caribbean and Andalusian dialects, we may find word-final nasal deletion with nasalization of the preceding vowel (e.g., *pan* [ˈpãŋ] ~ [ˈpã] ‘bread,’ *tapón* [taˈpõŋ] ~ [taˈpõ] ‘cork’) (Terrell 1975; Vaquero 1996; Hualde 2005: 123). In these cases, allophonic vowel nasalization could be seen as developing a contrastive role due to loss of the conditioning environment (i.e., the nasal consonant).

Although, the Spanish vocalic system has been described as being fairly stable across dialects (Quilis and Esgueva 1983; Morrison and Escudero 2007), there are situations where the Spanish vowels display some degree of variation in their realization. Vowel variation has been found in situations of language contact. For instance, Guion (2003) found a reduced vowel system for bilingual Spanish–Quechua speakers in Ecuador, and Willis (2005) encountered vowel variation in Southwest US Spanish compared with Mexican Spanish. O’Rourke (2010) found vowel differences between Lima and Cuzco speakers, the latter being in a context of more intense

contact with Quechua. Furthermore, the author found that Cuzco speakers show different vowel patterns depending on their knowledge of Quechua, so that native Spanish–Quechua bilingual speakers displayed a smaller vowel space than Spanish monolinguals. In noncontact situations, unstressed mid vowels seem to be most prone to variation. Raising of mid vowels in word-final position has been documented for western Puerto Rican Spanish (e.g., Navarro Tomás 1974 [1948]; Holmquist 1998, 2001; Oliver 2007; see Chapter 1 for mid-vowel raising in Peninsular varieties). Willis' (2008) study of the Dominican Spanish vocalic system shows that mid vowels present much variation and tend to overlap with neighboring high vowels.

A process affecting mid vowels that has received much attention in the literature is unstressed vowel reduction (i.e., shortening, devoicing and perceptual deletion of vowels in unstressed positions). This process is characteristic of Mexican and Andean Spanish, and it has been impressionistically documented in studies such as Lope Blanch (1963), Canellada and Zamora (1960), and Perissinotto (1975) for Mexican Spanish; Hundley (1983) and Lipski (1990) for Andean Spanish. These studies agree that the process is gradient and variable, that it targets mainly mid vowels, especially /e/, that it occurs most frequently in vowels preceding a word-final coda /s/, and that it is favored by faster speech rates. In an effort to acoustically define the process, Delforge (2008) presents quantitative, acoustic data regarding vowel reduction in conversational speech from Cuzco, Peru. This author finds that the most common realization of reduced vowels is completely devoiced and the least common is apparent elision. Delforge notes that reduction does not result in vowel centralization but rather in vowel devoicing, suggesting that reduction does not have any major effect on vowel quality. The data show that while word-medially /e/ and the high vowels have the highest rates of devoicing, in word-final syllables closed by /s/ and open syllables before a pause, all vowels show high rates. In addition, devoicing is highly favored by a contiguous /s/ but reduced vowels also occur preceding or following other voiceless consonants (including assimilated /f/). Furthermore, word position affects the process so that devoicing is more common word-finally than in any other position. It should be noted that in Delforge's data, vowel devoicing does not seem to be dependent upon speech rate.

(1) Examples of unstressed vowel reduction in Andean Spanish (Delforge 2008)

<i>Cusqueña</i>	[kus'kepa]	'a beer brand'
<i>viajes</i>	['bjaxɛs]	'trips'
<i>casi todo</i>	['kasi'toðo]	'almost all'
<i>alpakas</i>	[al'pakas]	'alpacas'
<i>estos</i>	['estɔs]	'these'

Based on her results, Delforge (2008) analyzes unstressed vowel reduction in Andean Spanish within the framework of Articulatory Phonology (Browman and Goldstein 1989) and argues that the process stems from different degrees of gestural overlap between consonants and vowels in Andean Spanish. On the other hand, Lipski (1990), working within an autosegmental framework, represents unstressed vowel deletion as the result of loss of [-consonantal] from the vowel featural representation due to phonetic shortening and devoicing. Both Delforge (2008) and

Lipski (1990) argue that /e/ is the vowel that most frequently devoices because of its status as [+coronal], a feature that it shares with /s/, the most common trigger of devoicing. They argue that this articulatory similarity between /e/ and /s/ favors the interaction between these two sounds, resulting in higher devoicing rates.

2.2 Glides

Spanish has a front or palatal high glide and a back or labiovelar high glide. Glides occur in tautosyllabic combinations of vocoids and differ from vowels in that they are nonsyllabic. They may occur in rising diphthongs (i.e., a glide [j, w] followed by a nuclear vowel as in *miel* ['mjel] 'honey' and *cuatro* ['kwa.tro] 'four') or in falling diphthongs (i.e., a nuclear vowel followed by a glide [j, ɥ], as in *veinte* ['bejn.te] 'twenty' and *caucho* ['kau.ʧo] 'rubber'). In the former case, glides are referred to as semiconsonants and in the latter, as semivowels. Note that the phonetic symbols used to represent Spanish glides tend to reflect this dichotomy, although not all studies follow this symbol usage (see e.g., Hualde 2005). Occasionally, mid glides [ɛ, ɔ] may occur in colloquial speech as a result of reducing a hiatus to a diphthong, for example *coquete* ['kɔe.te] 'firework' and *línea* ['li.nea] 'line' (Navarro Tomás 1977: 160). In some areas, these sequences may be further reduced giving rise to forms such as ['kwe.te] and ['li.nja]. This process of vowel raising and diphthongization has been reported in Latin American and Peninsular Spanish (see, among others, Moreno de Alba 1994; Jenkins 1999; Hualde and Prieto 2002; Face and Alvord 2004; Alba 2006; Garrido 2007; Hernández 2009). The phonemic status of glides in Spanish is discussed in Section 4.1 below.

3 Consonant phonemes

Consonantal sounds are produced with some degree of constriction in the vocal tract. Three articulatory parameters are used to classify consonants: place of articulation, manner of articulation, and voicing. Table 5.2 includes the Spanish consonant inventory organized according to these three parameters. As I discuss below, some of these sounds do not occur in all dialects.

3.1 Obstruents

3.1.1 Stops Oral stop or plosive consonants are characterized by a complete interruption of the airflow. A complete closure of the vocal tract is followed by a release, which may be accompanied by a burst as the airflow rushes out. Spanish includes a series of voiceless stops /p, t, k/ and another of voiced ones /b, d, g/. The difference among their members lies in their place of articulation, bilabial, dental, and velar, respectively. Spanish voiced plosives are usually voiced throughout the closure (unlike English ones that tend to lack full voicing in certain contexts). In some contexts, voicing might be partial during the closure but it

Table 5.2 Spanish consonant inventory.

	bilabial		labiodental		interdental		dental		alveolar		alveopalatal		palatal		velar		
	v/ss	vd	v/ss	vd	v/ss	vd	v/ss	vd	v/ss	vd	v/ss	vd	v/ss	vd	v/ss	vd	
Stop	p	b					t	d									g
Fricative			f		θ				s					ʃ		k	x
Affricate																	
Nasal																	
Lateral																	
Rhotic-tap																	
Rhotic-trill																	

v/ss = voiceless.
vd = voiced.

always starts before the release. Spanish voiceless plosives lack aspiration; that is, the release of the closure occurs at the same time or slightly before the beginning of voicing for the following vowel (for more on the VOT of Spanish plosives, see Abramson and Lisker 1973; Williams 1977; Casteñada Vicente 1986).

After continuants (i.e., vocoids and continuant consonants), voiced plosives are not produced with a full closure but rather with some approximation of the articulators (see voiced obstruents in Chapter 6 for more details). These continuant allophones, represented as [β, ð, ɣ], are characterized by uninterrupted airflow, with a variable degree of constriction depending on context, style, speech rate, and dialect. Some authors characterize them as phonetically approximants (e.g., Martínez Celdrán 1984b, 1991, 2004).

Voiceless stops are realized as voiced in certain dialects, mainly in Cuban Spanish (Ruiz Hernández and Mirayes 1984; Quilis 1993: 222–224) and Canary Islands Spanish (Trujillo 1980, Oftedal 1985, Marrero 1988). Voicing of voiceless stops has also been documented in several Peninsular varieties (e.g., Torreblanca 1976 for Toledo, Machuca Ayuso 1997 for Barcelona, Lewis 2001 for Bilbao, and Martínez Celdrán 2009 for Murcia). Voicing may occur in word initial or internal position, and it might be subject to stylistic restrictions (cf. Martínez Celdrán 2008). Spectrographic evidence from several studies shows that this weakening process is gradient and that the resulting realizations may range from partial voicing to lenited pronunciations with more or less constriction (Torreblanca 1976; Oftedal 1985; Machuca Ayuso 1997; Lewis 2001; Martínez Celdrán 2009). The examples in (2) illustrate this point. It should be noted that some dialects, namely Colombian (Lewis 2001) and Argentine Spanish (Colantoni and Marinescu 2010) do not participate in this weakening process.

(2) Voicing of voiceless stops (from Quilis 1993)

<i>Orthography</i>	<i>Standard</i>	<i>Voicing dialects</i>	
<i>campana</i>	[kam'pana]	[kam'bana]	'bell'
<i>pizarra</i>	[pi'sara]	[bi'sara]	'blackboard'
<i>tacón</i>	[ta'kon]	[ta'yón]	'heel'
<i>cuatro</i>	['kwatro]	['kwaðro] ~ ['kwaɟro]	'four'

The voicing contrast among stops is usually neutralized in coda position so that stops in this position are differentiated only by their place of articulation. The realization of plosives in this context may range from a voiceless stop in emphatic pronunciations to a voiced approximant or noncontinuant in a more neutral or conversational style, with other possible intermediate realizations (Navarro Tomás 1977; Hualde 2005: 146). The precise production of these sounds includes different degrees of constriction and voicing depending on style and phonetic environment. For example, stress is reportedly a relevant factor, and neutralization tends to be more likely when the syllable is not stressed (Navarro Tomás 1977: 77). The examples in (3) show the standard orthography and some of the possible productions for words containing a coda stop. It should be noted that the possible

pronunciations for the orthographic pairs *p-b*, *t-d* and *k-g* in coda are exactly the same, illustrating the loss of contrast in that context.

(3) Neutralization of voicing among stops in coda position

<i>Orthography</i>	<i>Variable productions</i>	
<i>apto</i>	[ʼapto ~ ʼaβto ~ ʼabto ~ ʼaβto]	ʼaptʼ
<i>absoluto</i>	[apsoʼluto ~ aβsoʼluto ~ absoʼluto ~ aβsoʼluto]	ʼabsoluteʼ
<i>atmósfera</i>	[atʼmosfera ~ aɖʼmosfera ~ adʼmosfera ~ aɖʼmosfera]	ʼatmosphereʼ
<i>admitir</i>	[atmiʼtir ~ aɖmiʼtir ~ admiʼtir ~ aɖmiʼtir]	ʼadmitʼ
<i>doctor</i>	[dokʼtor ~ doɖʼtor ~ dogʼtor ~ doɖʼtor]	ʼdoctorʼ
<i>dogma</i>	[ʼdokma ~ ʼdoɖma ~ ʼdogma ~ ʼdoɖma]	ʼdogmaʼ

This voicing neutralization is reflected in the Spanish lexicon, which does not exploit the voicing contrast among plosives in coda position; that is, we do not find lexical items that only differ in the voicing of their coda stops (Quilis 1993: 204). Note that this is relevant only for word-internal codas since word-finally, only /d/ occurs in Spanish words (there are some exceptions that include mainly borrowings, e.g., *déficit* ‘deficit,’ *club* ‘club,’ etc.).

Quilis (1993: 205) proposes three archiphonemes /B, D, G/ for stops in coda position. These archiphonemes do not contrast in voicing and have a variable phonetic realization depending on the factors mentioned above. Quilis’ archiphonemic analysis bears some resemblance with an underspecification approach to neutralization, under which coda stops would be underspecified for the voice feature, resulting in a variable realization of voicing.

The neutralization facts are somewhat different in some Castilian dialects. In these varieties, /g/ in coda position tends to be pronounced as a voiceless velar fricative [x] (e.g., *ignorante* [ixnoʼrante] ‘ignorant,’ *pragmático* [praxʼmatiko] ‘pragmatic’). This results in the preservation of the contrast between /k/ and /g/ in coda position, for example in items such as *doctor* [doɖʼtor] vs. *dogma* [ʼdoxma] (Hualde 2005: 148). In the same dialectal region, coda /d/ is sometimes pronounced as a voiceless (inter)dental fricative [θ] (e.g., *red* [ʼreθ] ‘net,’ *verdad* [berʼðaθ] ‘truth’), giving rise to the neutralization between coda /d/ and /θ/ (González 2002, 2006).

Vocalization of coda stops also results in neutralization of the voicing contrast. This type of vocalization is found in some dialects, where voiced and voiceless stops in syllable-final position are realized as glides. Quilis (1993: 220) points out that vocalization is more common among labial and velar obstruents, given that the Spanish glides share more properties with them than with dental obstruents. Data from vocalization in Chilean Spanish shows that /p, b/ are vocalized into [w], /t, d/ into [j], and /k, g/ into either [w] or [j], depending on the dialect (see examples in (4)) (Lenz 1940; Oroz 1966 cited in Martínez-Gil 1997). Vocalization can be seen as another weakening process of stops in coda position.

(4) Vocalization of coda stops in Chilean Spanish

Orthography	Standard	Dialectal Chilean	
<i>apto</i>	/ˈapto/	[ˈawto]	‘apt’
<i>objeto</i>	/obˈxeto/	[owˈxeto]	‘object’
<i>étnico</i>	/ˈetniko/	[ˈejniko]	‘ethnic’
<i>admirar</i>	/admiˈrar/	[ajmiˈrar]	‘to admire’
<i>doctor</i>	/dokˈtor/	[dojˈtor] ~ [dowˈtor]	‘doctor’
<i>dogma</i>	/ˈdogma/	[ˈdojma] ~ [ˈdowma]	‘dogma’

An extreme case of coda stop neutralization is found in Caribbean dialects, where coda plosives tend to be subject to neutralization not only in voicing but also in their place of articulation. In these cases, any syllable-final plosive may be realized as a velar consonant or a glottal stop. This can be seen in the colloquial Caribbean pronunciation of *admitir* [ajmiˈtir], *submarino* [sukmaˈrino], and *étnico* [ˈeʔniko] ‘admit, submarine, ethnic,’ which in a more standard pronunciation would be [aðmiˈtir], [suβmaˈrino], and [ˈeðniko] (Guitart 1976: 23; Zamora and Guitart 1982: 109). Morgan (2010: 197) notes that this type of place neutralization among coda plosives is more extended than previously reported and can be found in dialects other than the Caribbean.

Coda stops are often subject to deletion in Peninsular Spanish, even in the speech of educated speakers, and we can find pronunciations such as *obsesión* [oseˈsjon] vs. [oβseˈsjon] ‘obsession,’ *taxi* [ˈtasi] vs. [ˈtaysi] ‘taxi’. Deletion of coda plosives is also present in Latin American Spanish but to a lesser extent, being more restricted to rural areas (Hualde 2005: 147).

3.1.2 Affricates and fricatives Fricative consonants are characterized by a continuant flow of the air stream through a narrowing in the vocal tract. This articulatory configuration results in frication noise, which is the main acoustic characteristic of this group of sounds. Spanish fricatives include /f, θ, s, x/. The phoneme /f/ is found only in onset position, and its realization is most frequently as a labiodental fricative (e.g., *farola* [faˈrola] ‘lamppost,’ *sofá* [soˈfa] ‘sofa’). There are, however, reports that in Caribbean dialects this phoneme might be realized as a voiceless bilabial fricative [ɸ], especially before the diphthong [we] (e.g., *afuera* [a.ɸwe.ra] ‘outside’) (Jiménez Sabater 1975; Vaquero 1996). The voiceless alveolar fricative /s/ has two main types of articulation depending on the dialect. Castilian Spanish has an apico-alveolar production, and Andalusia, Canary Islands, and Latin American Spanish has a predorso- or lamino-alveolar realization (see Quilis 1993: 248–251 for other less common realizations).

Word- and syllable-final /s/ is subject to weakening in many Spanish dialects, resulting in aspiration or loss of this segment (see studies cited below and, among many others, Terrell 1979, 1986; Alba 1982; Lipski 1984, 1985; Amastae 1989; Carvalho 2006; File-Muriel 2009; see also Chapter 6 for more on /s/ weakening and its interaction with other segmental phenomena). The process of /s/ weakening can be found in Southern Peninsular varieties and in Canary Islands Spanish.

This process is also widespread in Latin America, with the exception of the highlands of central Mexico and Guatemala, central Costa Rica, and the Andean region (Lipski 1994; Hualde 2005: 161). The degree and frequency of /s/ weakening and its phonetic result vary across dialects (Terrell 1977, 1979; Bybee 2000; Torreira 2006), with Caribbean varieties reportedly showing the highest rates of aspiration and deletion (Bybee 2000; Hualde 2005: 161). The process of /s/ weakening is also subject to much variation due to other social and linguistic factors. Style and socioeconomic status have been identified as conditioning the degree of weakening, with higher rates in casual styles and among less educated speakers (Lipski 1985; Alba 2004). Weakening is more frequent in some phonological contexts than in others (Bybee 2000; Hualde 2005: 161–163): preconsonantal position, whether word-internally or across words, is the environment that most favors weakening (e.g., *este* [ˈe.h.te] ~ [ˈe.te] ‘this,’ *las camas* [lah ˈka.mah] ~ [la ˈka.mah] ‘the beds’), followed by pre-pausal position (e.g., *vamos* [ˈba.moh] ‘let’s go’). The environment with the least frequency of /s/ weakening is before a vowel (e.g., *las olas* [lah ˈo.lah] ‘the waves’), although there are some dialects, for example in New Mexico Spanish, where pre-vowel /s/ is subject to high rates of aspiration even at the beginning of a word (e.g., *la semana* [la he.ˈma.na] ‘the week’) (Brown and Torres Cacoullós 2002; Brown 2005).

The interdental fricative /θ/ is found only in some dialects, mainly those spoken in central and northern Spain, which show a phonemic distinction between /s/ and /θ/ (e.g., *casa* [ˈkasa] ‘house’ vs. *caza* [ˈkaθa] ‘hunting’). Most dialects, including those found in Andalusia, Canary Islands, and most of Latin America, lack the interdental fricative phoneme /θ/, which in these dialects corresponds to /s/ (e.g., *casa* [ˈkasa] ‘house’ vs. *caza* [ˈkasa] ‘hunting’). This is called *seseo*. A smaller number of dialects do not show a contrast between these two phonemes, but the sound they have is a dental fricative, very similar to /θ/. This is called *ceceo* and can be found in Eastern Andalusia and some parts of Central America.

The voiceless velar fricative /x/ is subject to much dialectal variation, the main realizations being [x, χ, h, ç]. In Castilian Spanish, /x/ has a more retracted realization, being frequently described as uvular [χ] especially when followed by a back vowel (e.g., *junta* [ˈχunta] ‘meeting,’ *ajo* [ˈaχo] ‘garlic’) (Navarro Tomás 1977: 142; Hualde 2005: 154). In Andalusia, the Canary Islands, the Caribbean, and Central America, /x/ is pronounced as a laryngeal /h/ (e.g., *caja* [ˈkaha] ‘box’ and *gente* [ˈhente] ‘people’). In Chilean Spanish, /x/ preceding a front vowel /i/ or /e/ has an anterior articulation, being produced as the palatal fricative [ç] (e.g., compare *gente* [ˈçente] ‘people’ and *gira* [ˈçira] ‘it spins’ with *jarrón* [xaˈron] ‘vase’) (Lipski 1994: 201; Hualde 2005: 155). The velar realization [x] is found in the rest of the dialects (i.e., Mexico and most of South America).

Affricates are characterized by two phases in their articulation. They start with a complete closure, quickly followed by a slight opening of the vocal tract, through which air rushes out resulting in friction. Spanish has one affricate phoneme /tʃ/, a voiceless alveopalatal that occurs only in onset position (e.g., *pecho* [ˈpe.tʃo] ‘breast,’ *chico* [ˈtʃi.ko] ‘boy’). In some dialects, the voiceless affricate is realized as a voiceless prepalatal fricative [ʃ] (e.g., *cacho* [ˈkaʃo] ‘piece,’ *chino* [ˈʃino] ‘Chinese’). This can be

seen as an instance of articulatory weakening, by which the affricate loses its closure phase but retains its frication release. These fricative variants can be found in northern Mexico, the Dominican Republic, Puerto Rico, Cuba, Chile, and Andalusia.

Orthographic *ll*, *y*, and *hi* when followed by a non-high vowel, represent a voiced palatal obstruent /ʝ/, whose pronunciation is subject to much variation. Its degree of constriction may vary depending on the environment, style, speech rate, and dialect, ranging from a stop to an approximant (see Aguilar 1997). The voiced palatal continuant [j] usually occurs after a vowel or a continuant consonant (e.g., in *maya* [ˈmaja] ‘Mayan,’ *la llave* [la ˈjaβe] ‘the key,’ *la hierba* [la ˈjerβa] ‘the grass’). We tend to find allophonic realizations of this palatal sound as a voiced affricate or plosive [ʝ] when it occurs after a lateral or nasal consonant or after a pause. However, affricate productions are often found in intervocalic position in Mexican and Caribbean varieties (Jiménez Sabater 1975: 108–110; Lope Blanch 1989, 1996; Martín Butragueño (in press)). Furthermore, in certain dialectal areas, most prominently in New Mexico and northern Mexico, the palatal obstruent has a very weak pronunciation and may be deleted between /i/ or /e/ and another vowel (e.g., *anillo* [aˈnio] ‘ring,’ *cabello* [kaˈβeɽo] ‘hair’) (Canfield 1981: 80; Lipski 1990; Alvar 1996). The phonemic status of [j] ~ [ʝ] is discussed in Section 4.2 below.

Argentinean Spanish has developed a different pronunciation for [j] ~ [ʝ]. In this variety, we find a voiced or voiceless prepalatal fricative [ʝ ~ ʃ] in contexts where the palatal obstruent is used in other dialects (e.g., *maya* [ˈmaʝa] ‘Mayan,’ *llave* [ˈʝaβe] ‘key’), but note that orthographic *hi-* is not subject to this development, and it is pronounced like in other varieties (i.e., *hierba* [ˈjerβa] ‘grass’ vs. *yerba* [ˈʝerβa] ‘mate leaf’). This type of pronunciation is referred to as *žeismo* or *rehilamiento*. The voiceless variant seems to be a newer development, and devoicing is more common among younger generations, women, and members of the middle class (Wolf and Jiménez 1979; Guitarte 1955; Lipski 1994: 170).

3.2 Sonorants

3.2.1 Nasals Nasal consonants are produced with an oral closure and a lowered velum, which allows the air to flow through the nasal cavity. There are three nasal phonemes in Spanish /m, n, ɲ/, which contrast in their place of articulation (i.e., bilabial, alveolar, and palatal, respectively). As for their distribution, the three nasals can be found word-medially, in onset position, giving rise to minimal triplets such as *cama* /ˈkama/ ‘bed’ vs. *cana* /ˈkana/ ‘gray hair’ vs. *caña* /ˈkaɲa/ ‘cane.’ Word-initially, the palatal nasal has a very limited occurrence, mainly in borrowings from indigenous languages (e.g., *ñame* [ˈɲame] ‘yam’) and some words of Leonese origin since Leonese palatalizes initial /n/ (e.g., *ñublado* [ɲuˈβlaðo] ‘cloudy’) (Hualde 2005: 173–174). In coda position, there is neutralization and nasals assimilate to the place of articulation of a following consonant (see nasal assimilation in Chapter 6). Word-finally, both /n/ and /m/ may occur, although /m/ is limited to a handful of

borrowings (e.g., *álbum* 'album'), and in these cases, it tends to be pronounced as [n]; however, note that a word-final nasal is realized as bilabial [m] in some varieties of Colombian and Yucatán Spanish (Hualde 2005: 176).

In some Latin American and Peninsular varieties, a word-final nasal before a pause is realized as velar [ŋ]. Velarization of final nasals is frequently accompanied by nasalization of the preceding vowel (e.g., *pan* ['pãŋ] 'bread,' *corazón* [kora'sõŋ] 'heart'). This phenomenon is widely found across the Spanish-speaking world, including the Caribbean, the Pacific coast of South America, Canary Islands, and the Spanish regions of Asturias, Galicia, León, Extremadura, and Andalusia (see, among others, Alonso et al. 1950; Malmberg 1965: 3; Zamora Vicente 1967: 416; Jiménez Sabater 1975: 116–119; López Morales 1980; Quilis and Graell 1992; Quilis 1993: 239–242).

3.2.2 Liquids: laterals and rhotics The term liquid includes lateral and rhotic sounds, which tend to pattern together. For example, these sounds share similar distributional properties in Spanish: only a lateral or a rhotic may appear after another consonant in a complex onset (see Chapter 7). Each type of liquid will be discussed in turn below.

Laterals are produced by creating a closure at some point in the middle part of the vocal tract and leaving the sides of the tongue open (both or just one side, depending on the speaker), allowing the airflow to escape through that opening. Spanish has primarily one lateral phoneme, voiced alveolar /l/, which can occur in any syllabic position (e.g., *lago* ['la.ɣo] 'lake', *ala* ['a.la] 'wing,' *claro* ['kla.ro] 'clear,' *mal* ['mal] 'bad'). In coda positions, /l/ assimilates in place of articulation to a following consonant articulated with the front of the tongue (i.e., not to labials or velars; see lateral assimilation in Chapter 6).

Some dialects have a second lateral phoneme, namely the palatal lateral /ʎ/. It can be found mainly in the speech of older speakers in north and central Spain, northern Argentina, Paraguay, and the Andean Region (Canfield 1981: 6–7; Hualde 2005: 180). This sound, which only occurs in onset position, corresponds to orthographic *ll* and contrasts with /j/, which corresponds to orthographic *y*. Most dialects lack this distinction since they only have the palatal obstruent phoneme. This situation is called *yeísmo*, where /ʎ/ has merged with the obstruent /j/, and lexical distinctions based on the /ʎ/ vs. /j/ contrast have been lost; see examples in (5). In dialects with *lleísmo*, on the other hand, a contrast between /ʎ/ and /j/ exists and we find lexical contrasts based on this opposition. The examples in (5) illustrate these two situations.

(5)	Orthography	'Yeísta' dialects	'Lleísta' dialects	
	<i>haya</i>	['aja]	['aja]	'had'
	<i>halla</i>	['aja]	['aʎa]	'finds'
	<i>cayó</i>	[ka'jo]	[ka'jo]	'fell'
	<i>calló</i>	[ka'jo]	[ka'ʎo]	'became quiet'

Spanish also has two rhotics, a tap /r/ (*vibrante simple*) and a trill /r/ (*vibrante múltiple*). Both of them are alveolar, the tip of the tongue and the alveolar ridge being the active and passive articulators, respectively. But each rhotic involves a different production mechanism: the tap consists of a single alveolar closure, while the trill is produced with several, quick closures. However, the trill is not just a series of taps since the articulatory configuration responsible for it differs from that for the tap (but cf. Harris 1983: 67–68). Trills require more “muscular tension” (Navarro Tomás 1977: 122–123) and greater articulatory precision (Recasens 1991). In fact, Spanish trills involve the Bernoulli effect in their production; that is, the rapid closures are the result of the aerodynamic conditions created in the vocal tract, while taps are produced by a single, voluntary movement of the tongue tip (Martínez Celdrán and Fernández Planas 2007: 149–151).

The two Spanish rhotics are contrastive only in intervocalic position within a word. In this context, we can find minimal pairs such as *perro* /'pe.ro/ 'dog' vs. *pero* /'pe.ro/ 'but,' *carro* /'ka.ro/ 'cart' vs. *caro* /'ka.ro/ 'expensive.' Word-initially and after a heterosyllabic consonant, only /r/ occurs (e.g., *rosa* ['rosa] 'rose,' *sonrisa* [son.'ri.sa] 'smile'). In complex onsets, only /r/ is possible (e.g., *broma* ['broma] 'joke,' *centro* ['sentro] 'center'). In coda position, there is some variation. When there is a following vowel and resyllabification takes place, we find only /r/. On the other hand, if there is no resyllabification because of a following consonant or pause, then either the tap or the trill may occur, although the most common realization tends to be the tap. The trill is usually restricted to emphatic productions, although some dialects tend to prefer trill realizations of coda rhotics in general (and also of rhotics in onset clusters; Alonso 1945; Hualde 2005: 182).

Rhotics are not always produced with a complete closure. We can find continuant variants that range from fricative to approximant realizations depending on the constriction degree (Blecua 2001; Martínez Celdrán and Fernández Planas 2007: 157). These pronunciations might occur in any position and are more likely to occur in conversational styles. Furthermore, rhotics are subject to an array of non-normative pronunciations depending on the dialect. Assibilation of rhotics is present in a number of geographical areas, including the Andean region, parts of Mexico and Central America, Paraguay, and northern Argentina (e.g., Argüello 1978; Lipski 1994; Moreno de Alba 1994; Bradley 2004; Serrano 2006; Lastra and Martín Butragueño 2006). These continuant variants are generally voiced, although there are also voiceless instances, and show frication in their high frequencies, which gives them a strident-like quality (Quilis and Carril 1971). Within the Spanish dialectological tradition, the symbol [r̥] is used to represent assibilated rhotics. They may occur in different contexts, depending on style and dialect (e.g., *verde* ['beřðe] 'green,' *carro* ['kařo] 'car'; see Bradley 1999, 2004 for an articulatory-based analysis of Ecuadorian assibilation). Assibilation also affects the consonant cluster /tr/, which is produced as a devoiced affricate [t̥r̥]. This variant is found in Chile, Costa Rica, Ecuador, and La Rioja region of Spain (Quilis 1993: 352–354).

Velar or dorsal realizations of rhotics are found in several Caribbean varieties, especially in Puerto Rican Spanish. These dorsal variants are articulated with the tongue postdorso and range from a velar fricative [x] to a uvular rhotic [ʀ]. They may be either voiced or voiceless (e.g., *rico* ['xiko] ~ ['riko] 'rich,' *corro* ['koxo] ~ ['koro] 'I run') (Vaquero and Quilis 1984; Quilis 1993: 350–351). In Caribbean dialects, we can also find pre-aspirated realizations of trills. These variants are produced with some pharyngeal friction followed by an alveolar tap or trill, and they are subject to some degree of devoicing (Quilis 1993: 351–352; Hualde 2005: 187). The symbol [hr] is used to represent these pre-aspirated sounds (e.g., *tierra* ['tjehra] 'earth,' *Ramón* [hra'mon] 'Raymond'). Willis (2006, 2007) presents spectrographic data from Dominican Spanish showing that these pre-aspirated rhotic realizations are better characterized as containing pre-breathy voice, and he argues for using the IPA symbols [fir] or [fir] depending on the number of taps that follow the pre-breathy portion.

3.2.3 Neutralization of liquids Neutralization of liquids in coda position is found in several dialects, in which the difference between a lateral and a rhotic is lost, and they lack lexical distinctions based on this contrast (e.g., *mar* ['mar] 'sea' vs. *mal* ['mal] 'bad'). The resulting sound varies depending on the region and even within the same speaker (Hualde 2005: 188). In some dialects, coda /l/ is pronounced as a rhotic. This is called rhotacism and can be found in the Canary Islands (Marrero 1988), Andalusia (Quilis-Sanz 1998), and to a lesser extent in Puerto Rico and in some regions of the Dominican Republic (Quilis 1993: 325–326). Other varieties neutralize into a lateral (i.e., coda rhotics are realized as /l/). This phenomenon is called lambdacism and it has been attested in Cuba, Dominican Republic, and Puerto Rico. Lambdacism is reportedly most frequent word-finally and is highly disfavored before a nasal consonant (Quilis 1993: 356). In Puerto Rican Spanish, the result of lambdacism has been impressionistically described as an intermediate sound between a rhotic and a lateral (e.g., Navarro Tomás 1948: 76; Hualde 2005: 188). Recent experimental work characterizes this sound as an approximant and shows that it is different from [l] in its acoustic features, more precisely in its formant trajectories and duration, although the precise acoustic differences vary across speakers (Paz 2005; Simonet et al. 2008). Furthermore, Paz (2005) shows that Puerto Rican speakers can perceive the difference between lexical coda /l/ and /r/, even in cases where the difference has supposedly been neutralized, while speakers of other varieties, namely Argentine Spanish, have difficulty perceiving the difference. Based on these results, Simonet et al. (2008) conclude that liquid neutralization in Puerto Rican Spanish is incomplete and less common than previously reported.

Vocalization of coda rhotics and laterals is common among lower socioeconomic levels in the Dominican region of El Cibao (Jiménez Sabater 1975: 90–105; Alba 1990). In this variety, coda liquids are realized as a palatal glide [j]. Also, some dialects delete coda liquids with or without gemination of the following consonant (see total assimilation of liquids in Chapter 6).

(6) Orthography	Standard	Rhotacism	Lambdacism	Vocalization	
<i>algo</i>	[ˈalɣo]	[ˈarɣo]	[ˈalɣo]	[ˈajɣo]	'something'
<i>aquel</i>	[aˈkel]	[aˈker]	[aˈkel]	[aˈkej]	'that'
<i>porque</i>	[ˈporke]	[ˈporke]	[ˈpolke]	[ˈpojke]	'because'
<i>comer</i>	[koˈmer]	[koˈmer]	[koˈmel]	[koˈmej]	'to eat'

4 Quasi-phonemic contrasts

4.1 Glides vs. high vowels

Many studies analyze glides as allophones of the high vowels rather than as independent phonemes (Navarro Tomás 1977; Alarcos 1965; Quilis & Fernández 1985; Hualde 2005). This is based in the observation that high vowels are realized as glides when they are unstressed and next to another, nonidentical vowel (e.g., *cuento* [ˈkwento] 'tale,' *pienso* [ˈpjensɔ] 'I think,' *veinte* [ˈbejnte] 'twenty'). Thus, glides and high vowels seem to be in complementary distribution. However, in some dialects, there seem to exist near-minimal pairs which are based in a contrast between glides and high vowels (Aguilar 1999; Hualde and Prieto 2002; Hualde 2004). In these words, we find unstressed high vowels next to other vowels, where a glide would normally be expected. The examples in (7) include some of these pairs, where the word in the left column contains an exceptional unstressed high vowel.

(7) a. Exceptional high vowel	b. Expected glide
<i>dueto</i> [du.ˈe.to] 'duel'	<i>duelo</i> [ˈdwe.lo] 'duet'
<i>huida</i> [u.ˈi.ða] 'looks after'	<i>cuida</i> [ˈkuj.ða] 'escape'
<i>pié</i> [pi.ˈe] 'I chirped'	<i>pie</i> [ˈpje] 'foot'

Some authors argue that words like those in (7a) should be lexically marked as exceptional, without positing an independent phonemic category for glides (e.g., Hualde 1997; Harris and Kaisse 1999). However, Hualde (2004) presents evidence that these exceptional words are not random since there are some factors that explain what positions show exceptional syllabification. He argues that there is contrast between glides and high vowels, but it is limited to certain positions where exceptional syllabification applies; see also Martínez Celdrán (1989: 78–84, 93–96) for further discussion of glides as a different phonemic category.

Further evidence against the analysis of glides as allophones of high vowels comes from contrasts such as *cambia* [ˈkam.bja] 'it changes' vs. *varía* [ba.ˈri.a] 'it varies.' Spanish verbs in the present indicative form are always stressed in the penultimate syllable. Thus, some authors argue that the contrast between verbs such as *cambiar* and *variar* is the result of an underlying distinction between high vowels and glides (Harris 1969: 122–125, 1983, 1989). However, other analyses

maintain that the difference between such verbs stems from the contrast between high vowels underlyingly specified as nuclear (e.g., in *varía*) and high vowels without any syllabic specification (e.g., in *cambia*). Under this view, there is no need to posit a phonemic distinction between glides and high vowels (Cressey 1978: 78–79; Roca 1997; see also Hualde 1997 for further discussion).

4.2 The phonemic status of [j ~ ʝ]

There are two main positions with respect to the phonemic status of the sound /j/ in Spanish. On the one hand, this sound can be seen as an allophone of the high vowel /i/. This view is based on the analysis of /j/ as the result of strengthening the glide [j] in syllable-initial position. On the other hand, /j/ can be treated as an independent consonantal phoneme. Evidence for this analysis comes from two sources, namely minimal pairs that, for some speakers, rely on the contrast between /j/ and /i/ and words that lack [j] fortition. Some (near)-minimal pairs that show a contrast between [j] and [ʝ] are illustrated in (8).

- (8) Minimal pairs showing the [j] vs. [ʝ] contrast
- | | | | | |
|-------------------------------|----------|-----|------------------------------|-----------|
| <i>desierto</i> [de.'sjer.to] | 'desert' | vs. | <i>deshielo</i> [des.'je.lo] | 'thawing' |
| <i>abierto</i> [a.'bjer.to] | 'open' | vs. | <i>abyecto</i> [ab.'jek.to] | 'abject' |

Supporters of the allophonic analysis of /j/ argue that these minimal pairs can be explained by referring to the relation between syllabic division and morphology (e.g., Hualde 1997). The words in the right column contain a prefix, which requires a syllable boundary right after it so that /j/ occupies a syllable-initial position and thus, strengthening takes place.

Regarding the second argument for the phonemic status of /j/ (i.e., words that do not show /j/ fortition), Hualde (2004) reports that educated speakers tend to avoid word-initial strengthening of words that begin with orthographic *hie* (e.g., *hiena* 'hyena') (see also Navarro Tomás 1977). In these cases, educated speakers disfavor a noncontinuant pronunciation in contrast with words beginning with orthographic *ll, y*, for which the whole range of constriction degrees is possible, including stop realizations. Some examples from Castilian Spanish taken from Hualde (2004) illustrates this point in (9), where we can see that the range of pronunciations for the high vowel /i/, the palatal glide /j/, and the palatal obstruent /j/ only partially overlaps (the symbols have been modified; Hualde uses [i̟] for all palatal glides). Here, we can talk about a quasi-phonological contrast induced by the orthography (see Hualde 2004 for further discussion).

- (9) Range of possible pronunciations in Castilian Spanish
- | | | |
|--------------|----------|--------------------------|
| <i>hiato</i> | 'hiatus' | [i.'a] ~ [i̟'a] |
| <i>hiena</i> | 'hyenna' | [i̟'e] ~ [i̟'e] |
| <i>yema</i> | 'yolk' | [i̟'e] ~ [i̟'e] ~ [i̟'e] |

5 Conclusion

This chapter has provided a general overview of the phonemes of Spanish and their main dialectal variants, including references to some of the major 'classics' in the field and to the most recent developments in the study of the Spanish sound system (see also Chapter 6 for further phonological processes). One of the main advances in recent years has been the use of laboratory or experimental approaches to the analysis of Spanish phonology and phonetics. Based on previous impressionistic, but nonetheless valuable, descriptions of the language, researchers have been able to give a more accurate and detailed picture of the Spanish sounds and their variation across the Spanish-speaking world using acoustic and articulatory data. Furthermore, new experimental methodologies allow us to integrate results from different linguistic subfields, for instance from sociolinguistics, language acquisition, and psycholinguistics, into the study of speech production and perception.

Some of the areas that have greatly benefited from laboratory approaches in recent years include the study of the Spanish sound inventory in contact situations such as Spanish in contact with indigenous languages in Latin America, with English in the United States, and with other Romance languages and Basque in the Iberian Peninsula. In this chapter, I mentioned some of the issues recently explored in relation to language contact, including the vocalic system and /s/ aspiration. Inter- and intra-dialectal rhotic variation is another area that has attracted a great amount of attention in recent years, especially from an experimental perspective. Several studies (see those cited above on rhotics in section 2.2.2) have presented evidence indicating that rhotic production is subject to more variation than previously reported. In fact, in some dialects, innovative realizations such as assibilated rhotics seem to be in the process of replacing canonical productions. This reconfiguration of the system has consequences for the phonemic analysis of rhotics that need to be explored. Recent empirical data are also challenging traditional analyses of neutralization in Spanish by showing that these neutralizations are in fact incomplete, as we saw for liquid neutralization in Puerto Rican Spanish in Section 3.2.3. In light of these results regarding incomplete neutralization, the supposed voicing neutralization of Spanish stops in coda position is called into question. Instrumental techniques could help answer this question and bring some insight into an area of Spanish phonology where much variation has been reported but where the exact realizations of coda stops and their distribution are far from clear.

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