

Puppets and their relationship with language – Hand puppets and their language use



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Introduction

The theme of my research is the relationship between puppets and language. This research delves into the fascinating realm where puppets and language intersect, with a specific focus on hand puppets, also known as muppet-type puppets. After providing a brief overview of the history of puppetry and a linguistic outline, my aim is to present the linguistic elements that form the basis of and colour the creation of a character. My hypothesis is that puppets reach their physical boundaries at some point, and beyond that, they are helped by various linguistic tools. As there is very little literature available on this topic, I support my thesis with empirical research. Using qualitative methods, complemented by in-depth interviews, I also shed light on why people do not find literature on this topic. Puppeteers from North America addressed my pragmatic inquiries. Based on the responses of the puppeteers, I am seeking answers to questions such as how it is possible to create many characters with a single voice, whether the nasal tone is used frequently, what phonetic or phonological phenomena are used in addition to meaningful words, and whether vocal compensation is necessary when the puppet reaches its physical limits. After analysing the responses and providing a linguistic explanation, I demonstrate the unique relationship between puppets and language by drawing on the television shows *The Muppet Show* and *Sesame Street*, created by Jim Henson, to analyse both the physical features and language use of some famous characters. In examining the characters, I draw on the literature to present and explain the linguistic phenomenon in detail. The choice of characters is based on the variety and colour of their language use, thus enriching the narrative. Among the characters is Kermit the Frog from the *Muppet Show*, examining his language use and how it changed when the performers changed. Also, the repertoire of Count von Count from *Sesame Street* is analysed, comparing it with the basis of the vampire character, Bela Lugosi, in the *Dracula* (1931) movie. The paper thus contributes to the field of puppetry and linguistic research and offers a new perspective on the relationship between character formation and language use.

1. A very brief overview of puppetry: history and innovations

The aim of this chapter is to provide a concise summary of the ancient history of puppets and to highlight a few of the most epoch-making or, in some way, outstanding puppet types of their time. The chapter does not focus on the detailed historical background, significance, and operation of the puppet types.

Puppetry is one of the art forms that have been present in humans' lives for hundreds and thousands of years. This ancient artistic expressive device has developed various types and techniques, which make puppetry unique and versatile (Trentelman, 1932). The term "puppet" has a Latin origin from "*pupa*", meaning girl or doll (Speaight, 1955). George Latshaw's (1978) definition of puppetry suggests that "a puppet can be any object that is animated by human control" (Latshaw, 1978) (p. 43). In fact, a puppet consists of three requirements: "a form to be animated", "a person to do the animating", and "a method of control that uses all or part of the puppeteer's body, or an extension of it through rods, strings, wires, magnets, or a combination of these" (Latshaw, 1978) (p. 43).

Consequently, puppets have various distinguishable types. Many of these forms have an ancient history, of which probably the oldest is shadow puppetry. The birth of this artistic form coincided with the discovery of shadows themselves. It was initially favoured in China and later spread to various cultures, such as India and Japan, where it is still popular (Giesen, 2018).

In the 18th century, in Japan, a new form emerged: a half-life-size doll, the bunraku, with already existing hands and legs and moving eyes, eyebrows, lips, and fingers. On account of their detailedness, these puppets required three manipulators to move. Puppeteers operating the bunraku wear long black costumes and hide their faces so as not to interfere with the visual experience (Bell, Puppets, Masks, and Performing Objects, 2001).

Another ancient type of puppet was a doll-like figure with rod or wire extensions. These puppets made their way from India to China and Japan, where their purpose was to entertain the gods and ordinary people as well. In Egypt and Greece, by virtue of expert mathematicians and engineers, puppets were equipped with bendable and moveable parts, like joints. These mechanisms were even further improved in Rome with an innovative form, manipulating the puppet from above by strings—this is the marionette that is well-known today. They became so popular that they spread all over Europe (Trentelman, 1932).

In the 17th century, a character named Punchinello made his arrival in England. Later, the name was shortened to Punch. The archetypical spirit had only a head and a chest, which were

worn on the operator's hand like a glove. Despite his ancient history, Punch kept his youth and is still a famous character from the *Punch and Judy Show* (Hall, 2019).

Obviously, there are many more forms of puppetry, for instance, human-arm puppets or marotte-type puppets, that could be discussed in detail, which can also be read in Jaramillo Carina's blog. (Jaramillo, 2023). For a more detailed guide, Elieen Blumenthal's book is recommended (Blumenthal, 2005).

Throughout the 20th century, puppetry went through quite a few innovations and reforms. One of these renewal transformations is hand puppetry ¹. The creator of the new type was Jim Henson with his new television programmes, the wide-spread *Muppet Show* and *Sesame Street*, among many others (Bell, Strings, Hands, Shadows, A Modern Puppet History, 2000). The puppets in these shows even have various different alterations, which make each character unique. However, Henson was not only considered innovative with the new form, but he indeed introduced several electric mechanisms and remote controls that are still used today. These programmes have also met educational needs since they were watched not only in the United States but all over the world (Parish, 2006). (See in detail about Jim Henson in Chapter *Exploring how Jim Henson's world pioneered a new epoch in puppetry.*)

In recent years, a young puppeteer has shown his talent with his boundary-pushing hand puppets. Barnaby Dixon has created several special characters, expanding hand puppetry in a direction that was never imagined before. His puppets are fairly small compared to Henson's and made of several tiny pieces clipped together. Dixon uses the pinkie and the index finger for the two legs. Therefore, the thumb can freely move and be used to control the compact buttons and mechanisms on the puppet. On characters with a torso, the upper body is connected with a magnet to the bottom half and uses a similar technique to the one used for the legs. The young puppeteer's aim is to make the audience fail to notice the mechanisms and forget about the whole process so that they can indulge themselves in the enchanting motions (Halliday, 2023).

Unfortunately, Henson and Dixon could not work together, which could have resulted in even greater reform in puppetry. Yet there is a connection between the two innovative puppeteers. Barnaby Dixon worked on *The Dark Crystal: The Age of Resistance* series, released on Netflix in 2019. The original film, *The Dark Crystal*, was created by Jim Henson in 1982, and the Netflix series was an expansion of the previous events in the immensely rich fantasy world. In this project, Dixon created, directed, and puppeteered his original work with his

¹ Note that hand puppetry here does not refer to glove puppets like Punch or Judy. The alternative name for the muppet-style puppets is the American expression “*hand and rod*” puppets.

recognisable method using the index finger and the pinkie. Therefore, it seems that his innovative technique is not just a sudden formation but could potentially be used for further puppets.

As suggested above, puppet theatre has taken on a wide range of new functions in contemporary culture, including those of art theatre, popular entertainment, an educational tool, and a persuasive tool. Puppeteers pursued varied combinations of these objectives at different times and places.

2. Exploring how Jim Henson's world pioneered a new epoch in puppetry

Jim Henson appreciated the power of the visual imagination and the value of creativity from an early age. His goal was to seek employment on television because he was found of the idea that what he saw on the screen was taking place somewhere else at the same time. As we already know by now, he indeed worked in television, although a bit differently than he initially imagined. He took part in several television commercials with puppets of his own making, of which the first was a coffee commercial. He changed the world of puppeteering forever by creating the *Muppets* (Finch, 1993). For many years, puppets were figures made of hard, non-flexible materials such as wood. Therefore, the set of excessive tools they could express was numbered. On the other hand, the use of flexible materials such as foam, fleece, and fur allows the puppets to freely move. Furthermore, most of Jim Henson's puppets are equipped with rods to operate the hands. So, one hand is in the puppet's head, responsible for the mouth movements and additional facial movements, if any, and the puppeteer's other hand operates the puppet's hands with the rod extensions. *The Muppet Show* and *Sesame Street* have a penchant for using flexible puppets in their shows. Of course, they vary from character to character; some tend to be more expressive and complex, some less so.

Sam and Friends (1955) was the first show to air twice a day on local Washington television where the early character of Kermit appeared (Strand, 2022). The show was also known as *The Early Muppets*, in which Jane Nebel (later Jane Henson) accompanied Jim as his first working partner. The word “*muppet*” was a combination of *marionette* and *puppet*. Although Henson insisted that he chose this name only because he liked the sound of it (Finch, 1993).

Filming cameras in the 1950s worked quite as distinctly as they do today. Revolving turrets, similar to microscopes, could be equipped with lenses of different focal lengths. Therefore, the employment of different varieties of lenses resulted in the illusion of spatial perception that Jim Henson frequently applied (Finch, 1993).

The picture (1. Figure) is as follows: puppeteers are standing in front of the camera with at least one hand pointing to the sky, on which the puppet is being placed, and the puppet's arm is controlled by rods, either by one or two puppeteers. How are they supposed to see the puppets and their movements? Of course, they can look up; otherwise, they could only see the bottom or the chin of their puppets. In addition, it is not guaranteed that they will not move out of the frame. Consequently, the only feasible solution was the application of television screens. The puppeteers are watching the puppets on a TV monitor in front of them while they are performing. This innovative use was not as easy as it may seem since the television screen is reversed. It was a skill worth perfecting because, this way, the puppeteers could see exactly what the audience did. The technique remains in use today as well (Finch, 1993).



1. Figure: Jim Henson & Kathy Mullen puppeteering Jen & Kira from the *Dark Crystal* (1982) (Drover, 2019)

In the case of full-body costume-like puppets such as Big Bird in *Sesame Street* or the Skeksis² in *The Dark Crystal*, a small monitor is positioned inside the costume's frame so that the puppeteer sees every movement they make (Henson, *The World of The Dark Crystal*, 1983), (Kinberg, 1994).

² The corrupt rulers of the world of Thra; towering bipeds who look like disturbing mixtures of vultures and Komodo dragons.

The novelty of muppet-type puppets was the use of flexible materials. However, different mechanisms were added to the puppets to make them more expressive. Puppets like Miss Piggy, Bert, Ernie, and all the members of Dr. Teeth and the Electric Mayhem are made of foam. The material is flexible enough for moving the mouth plate in certain positions and also rigid in the sense that it is capable of holding further mechanisms inside. These mechanisms are hidden from the audience, but their effects are very noticeable when a *Muppet* can blink, like Floyd Pepper, move their ears, like Fozzie Bear, or even lift their eyebrows, like Bert. These sorts of features make the puppet more expressive but also more difficult to operate.

The Dark Crystal movie was ingenious in many ways. They have built a fantasy world from scratch with a level of detail that rivals even the *Lord of the Rings* trilogy or the *Harry Potter* franchise. The level of detail is evident both visually and in the development of the characters. The flora and fauna that cover the planet of Thra and the apt appearance and naming of species all give the world a sense of colour. A sort of latex or silicone material was used for the skins of the Skeksis' heads. The rubbery material made even more facial expressions possible, among which they could differentiate between a smile (2. Figure) and a snarl (3. Figure) (Henson, *The World of The Dark Crystal*, 1983).



2. Figure Chamberlain, one of the Skeksis from *The World of The Dark Crystal* forming a smile (Henson, *The World of The Dark Crystal*, 1983)



3. Figure Chamberlain, one of the Skeksis from *The World of The Dark Crystal* forming a snarl (Henson, *The World of The Dark Crystal*, 1983)

Moreover, the creatures have mechanisms for blinking and moveable eyes, controlled by wires and electric mechanisms. These techniques made the puppets so complex that they required several puppeteers to operate a single head, using different cable-controlled technologies to control parts of the puppet remotely (Henson, *The World of The Dark Crystal*, 1983).

The same technique was preceded by a precursor, or an experiment, if you like, with Master Yoda from *Star Wars V – The Empire Strikes Back* (1980). The making of Yoda's puppet gave

an insight into the difficulties they would have to face when they started making the Skeksis to achieve the disturbing, naturalistic effect they wanted (Finch, 1993).

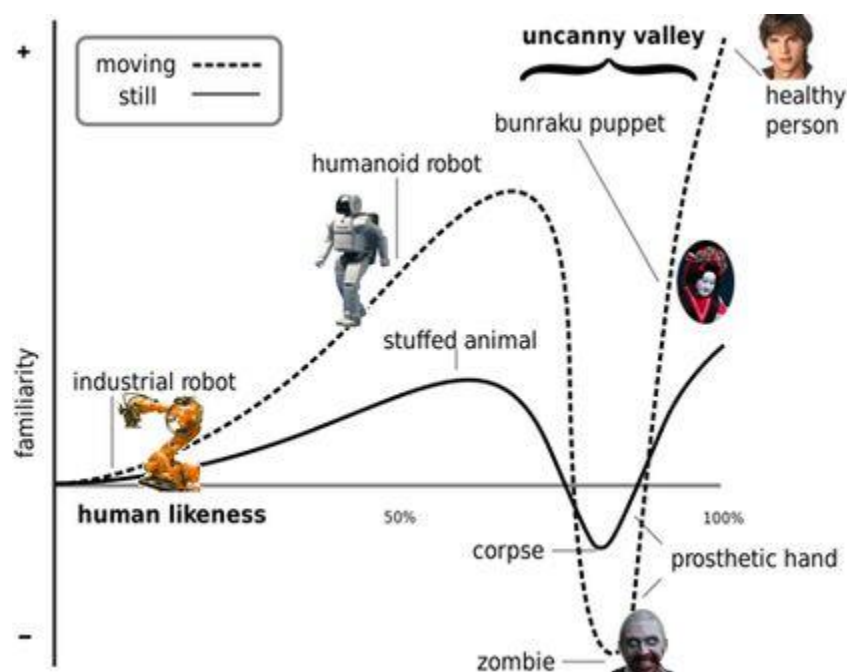
Jim Henson and his company excelled in the field of animatronics as well. They developed an electronic mouth mechanism that looked like a mitten. The gadget perceives movements from different angles and motions, which will be seen on a computer screen with a low-resolution virtual puppet called Waldo. The glove-like mechanisms are responsible not only for the mouth but for the whole body movement of the puppet. The picture of Waldo mimics exactly what the puppeteer does in real time. Another computer is used for displaying Waldo in higher resolution, where his appearance is already developed and detailed. The technique provided a base for future developments (The Jim Henson Company, 2011). With the evolution of computers, the electronic mouth plate was further developed with additional movements and mechanisms, which are used by the *Jim Henson Company* for digital puppeteering (Savage, 2023). Although Jim Henson was not the first to invent electronic devices that could be controlled remotely. Probably, the most famous use of the same technology appeared in the *Jurassic Park* movie (Failes, 2020).

3. Visual appearance and the Uncanny Valley

During the design of the interview questions, great emphasis was placed on the physical appearance of the puppets as well. Thus, the question of how much a puppet should resemble human appearance was a recurring topic. For this reason, I deem it necessary to present the Uncanny Valley Theory.

The theory originated with a Japanese professor, Masahiro Mori, in 1970. The concept of the uncanny valley posits a correlation between the degree of resemblance of a humanoid entity to a real human being and the ensuing emotion response elicited by such an entity (MacDorman & Ishiguro, 2006). The hypothesis suggests that humanoid entities bearing a close resemblance to real humans can elicit peculiarly familiar or even ‘uncanny’ sensations of repulsion or unease to observe. The term ‘valley’ marks the extreme drop in the affinity for the audience of the humanoid object. The line in the diagram would otherwise thrive linearly with the object’s degree of human likeness (Perera, 2023). The humanoid objects might be any number of items, such as lifelike dolls, virtual reality, photorealistic animation robotics, and 3D animations. The watchers may experience sensations of creepiness, uneasiness, or even revulsion as the object’s imagination eventually merges with reality. The uncanny valley has several ramifications for robotics, artificial intelligence, and technology made to help and service humans (Guizzo, 2010).

Figure 4. displays a diagram of the possible items on a spectrum of human likeness and familiarity. The dashed lines represent moving objects, and the continuous line shows objects that are still. It can be seen that as the percentage of human likeness increases familiarity is expected to grow gradually. However, as the human likeness reaches about 75%, it plummets enormously because the visuals of a zombie or a prosthetic hand might be disturbing to the eye. Studies show that even a bunraku or a marionette puppet may fall into this category (Guizzo, 2010), and (Tobe, 2014).



4. Figure: diagram of the uncanny valley (Guizzo, 2010).

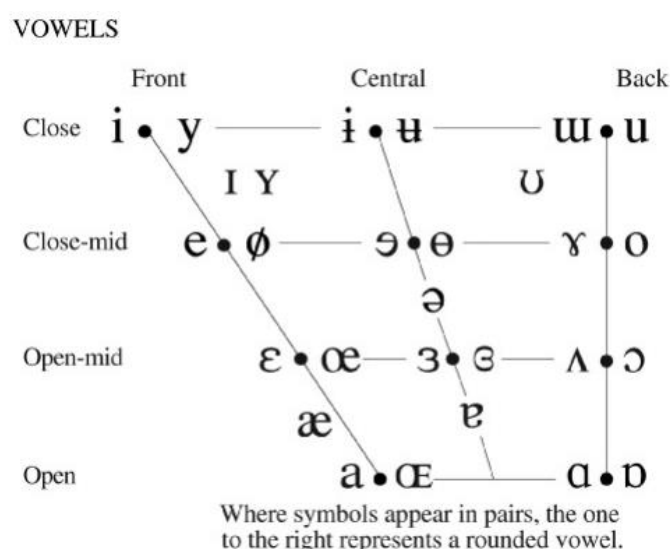
4. The linguistic basis of the phenomena under study

The aim of this chapter is to provide a general overview and cover the basic linguistic concepts and phenomena for all interested readers, regardless of any linguistic or non-linguistic background. The chapter provides an understanding of the rest of the essay, which gives examples based on the linguistic concepts and phenomena already known via this chapter. Although it will not be possible to describe all the sounds in detail in order to understand the further details, there are already many excellent textbooks for that purpose. Therefore, this section of the paper does not contain a detailed description of the characteristics of all the sounds in the languages. The use of figures and diagrams will aid comprehension and facilitate visualisation.

Speech production is made with the movements of the tongue and the lips, and most often by pushing the air from the lungs (Ladefoged & Johnson, A Course In Phonetics, 2015).

4.1. Articulatory properties of speech

Speech sounds can be categorised into two groups. Vowels are speech sounds in which the airflow can leave the lungs without obstruction or with minimal obstruction, and they are always voiced sounds. They can be described according to the extent to which the mouth is being closed or opened and the position of the tongue. (5. Figure)



5. Figure: IPA Chart: Vowels (2005)

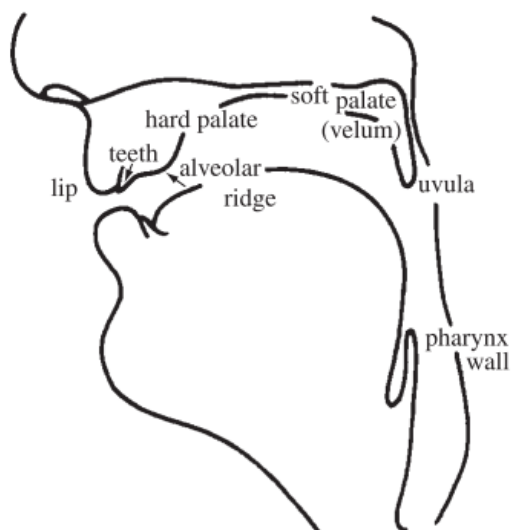
Speech production of consonants can be described according to three main features: voicing, meaning whether the vocal folds vibrate during the production of a particular sound; the place of articulation; and the manner of articulation. The majority of consonants in the International Phonetic Alphabet (6. Figure) can be found in the English language (Ladefoged & Johnson, A Course In Phonetics, 2015). During the production of the consonants, the airflow is obstructed by the speech organs (7. Figure). The sound will vary depending on which obstacle has completely or partially blocked the airflow. The blockage is often done by placing certain parts of the tongue at the places of the articulators (8. Figure).

CONSONANTS (PULMONIC)

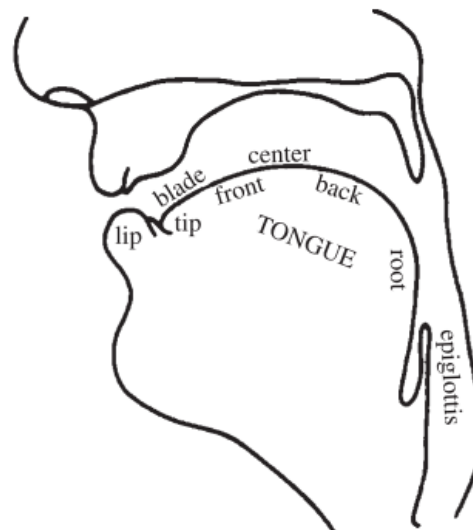
	Bilabial	Labiodental	Dental	Alveolar	Postalveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Glottal
Plosive	p b			t d		ʈ ɖ	c ɟ	k ɡ	q ɢ		ʔ
Nasal	m	ɱ		n		ɳ	ɲ	ŋ	ɴ		
Trill	ʙ			r					ʀ		
Tap or Flap		ⱱ		ɾ		ɽ					
Fricative	ɸ β	f v	θ ð	s z	ʃ ʒ	ʂ ʐ	ç ʝ	x ɣ	χ ʁ	ħ ʕ	h ɦ
Lateral fricative				ɬ ɮ							
Approximant		ʋ		ɹ		ɻ	j	ɰ			
Lateral approximant				l		ɭ	ʎ	ʟ			

Where symbols appear in pairs, the one to the right represents a voiced consonant. Shaded areas denote articulations judged impossible.

6. Figure: IPA Chart: Pulmonic consonants (2005)



7. Figure The principal parts of the upper surface of the vocal tract (Ladefoged & Johnson, A Course In Phonetics, 2015) (p. 10.)



8. Figure: The principal parts of the lower surface of the vocal tract. (Ladefoged & Johnson, A Course In Phonetics, 2015) (p. 11).

4.1.1. Nasals and nasalization

4.1.1.1. Nasals

One group of consonants for which I would like to provide a detailed description are the nasals. In the English language, three nasal consonants are used: the bilabial plosive nasal [m], the alveolar nasal [n], and the velar nasal [ŋ]. However, there are additional nasal sounds that are not present in English but used in other languages, such as the labiodental /ɱ/ in Teke languages (Maddieson, 1984), the nasal retroflex [ɳ], which is also quite rare, the palatal nasal [ɲ], which occurs in many languages: French, Spanish, Italian, and other non-Indo-European

languages (Ladefoged & Johnson, A Course In Phonetics, 2015), and the nasal uvular [ɴ], which is also used in very few languages.

The production of nasal sounds can be accomplished in two ways. One is by blocking the oral tract so that the air cannot leave, and the mouth becomes an oral side cavity. However, the blockage cannot extend beyond the uvula, as closure in the pharynx or larynx would completely halt airflow. In such cases, not only nasal sounds but any sound would be prevented. When the oral cavity is fully closed, those consonants are called purely nasal consonants ([m], [n], and [ɳ]). The other possible way to produce nasals is by lowering the velum to some extent so the air can leave both the oral and nasal cavities and the sound becomes partly nasal (Ladefoged & Maddieson, The Sounds of the World's Languages, 1996).

4.1.1.2.Nasalized sounds

On the other hand, “nasalized sounds are sounds whose production involves a lowered velum and an open oral cavity with simultaneous nasal and oral flow” (Botoma, 2020). During the production of nasalized sounds, the nasal sound affects one or even more adjacent sounds.

4.1.1.3.Prenasalized stops

In the case of prenasalized stops in the English language, the purely nasal sound is followed by a plosive consonant, and because the velum is not immediately raised back after the purely nasal sound, the beginning of the plosive sound becomes, similar to the previous tone, nasalized (ᵐb, ⁿd, ⁿg) (Ladefoged & Maddieson, The Sounds of the World's Languages, 1996).

4.1.1.4.Prestopped nasals

Prestopped nasals are also known as nasally released stops. There are not too many languages known that would have such a sequence, but in the Russian language, examples can be found for a plosive consonant followed by a nasal sound (Ladefoged & Maddieson, The Sounds of the World's Languages, 1996).

4.1.1.5.A nasal vowel

The formation of nasal vowels is very similar to the formation of nasal consonants. All of the vowels in the English language are articulated in such a way that the soft palate is raised, which creates a velic closure so the air leaves through the mouth and not through the nose. The vowel becomes nasalized if the velum is lowered so that the airstream can escape not only through the mouth but through the nose as well (Ladefoged & Johnson, A Course In Phonetics, 2015).

Nasal vowels are particularly common in the French language. Although in some cases it happens that vowels preceding the nasal sound become nasalized because the velum is already lowered, which results in the vowel becoming a nasal vowel. The table shows three French nasal vowel sounds and their possible spellings and pronunciations:

Phonetic Symbol	Name	Possible spelling
ã	nasal a	<i>an, am, aon, en, em,</i> blanc, ambiance, paon, enfant, temps
ɛ̃	nasal i	<i>ain, aim, ein, eim, en, em, in, im, un, um, ym, yn</i> pain, faim, chien, Reims, vin, import, un, humble, thym, lynx
õ	nasal o	<i>on, om</i> bon, ombre

(Chevalier-Karfis, 2022)

Above all, there are various different disabilities that can cause nasal speech. A hypernasal or hyponasal resonance can be caused by velopharyngeal dysfunction. When the velum or soft palate cannot make contact with the pharynx to seal the nose from the mouth, it causes hypernasality. The opposite happens during hyponasality, when there is an obstruction in the nose or an overclosure of the velopharyngeal port (Henny, 2022). The main causes of velopharyngeal dysfunction can be mislearning, neurological problems, or even structural problems (Linde, 2021). For speech pathologies or speech impairments, some experts use special puppets with exceptionally detailed puppets to help eliminate problems.

4.1.2. Characteristics and differences of /r/ sounds

The International Phonetic Alphabet differentiates eight different sounds as rhotics.

voiced alveolar trill	ʀ
voiced alveolar tap or flap	ɾ
voiced alveolar approximant	ɹ
voiced post-alveolar tap or flap (retroflex)	ɽ
voiced post-alveolar approximant (retroflex)	ɻ
voiced uvular trill	ʀ
voiced uvular fricative	ʁ
voiced alveolar lateral flap	ɺ

(Ladefoged & Maddieson, The Sounds of the World's Languages, 1996).

English uses relatively few of the rhotic sounds. Furthermore, there are two varieties of English that can be distinguished: rhotic and non-rhotic. With the non-rhotic variety (e.g., British English), many /r/ sounds in certain positions are not pronounced. On the other hand, in American English, all of the /r/-s are pronounced, and they mostly use the voiced alveolar approximant [ɹ]. There are languages that often use retroflex sounds; also, there is an English variety, namely dialects of India, known specifically for the use of retroflex sounds, including the voiced post-alveolar tap or flap [ɾ], and the voiced post-alveolar approximant [ɻ]. Retroflexes are articulated by curving the tip of the tongue back towards the hard palate, which creates the distinctive group of sounds. The voiced uvular trill [ʀ] and the voiced uvular fricative [ʁ] are typically used in French (Hardcastle, Laver, & Gibbon, 2010).

In the following short section, I would like to focus specifically on two /r/ sounds and name the pronunciation differences between them. One is the voiced alveolar tap or flap [ɾ], which is articulated by placing the tip of the tongue on the alveolar ridge. The sudden tap or flap touch creates the sound, and the tongue is replaced back to the floor of the mouth. The [ɾ] is most often used by speakers of Spanish; moreover, the Hungarian /r/ is indeed a voiced alveolar tap or flap [ɾ] (Ladefoged & Maddieson, *The Sounds of the World's Languages*, 1996). For most speakers of General American English, the /r/ sound is pronounced as the voiced alveolar approximant [ɹ]. The sound is also known as the ‘bunched r’; articulated by putting the tongue close to the alveolar ridge but not touching it, so that the air can slip through it, which is the main characteristic of every approximant sound (Ladefoged & Maddieson, *The Sounds of the World's Languages*, 1996).

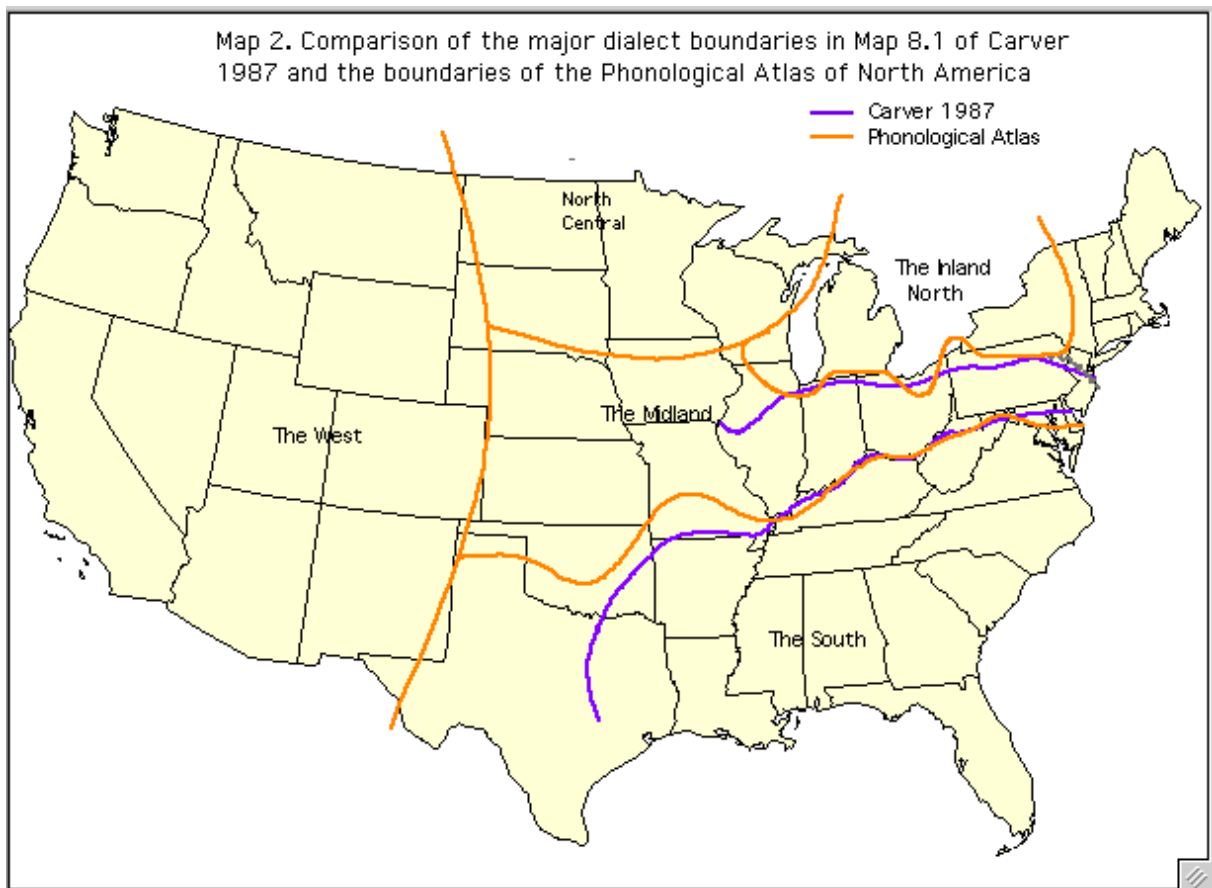
4.2. Dialects of American English

Dialect is a variation of language used by members of a particular group or class. Varieties of language can be categorised as regional or social dialects (Crystal & Ivić, 2023). Dialect can include differences in pronunciation, vocabulary, and grammar. Accent, on the other hand, only describes distinct ways of pronunciation, not including vocabulary or grammatical differences (Delaney, 2013). Due to the geographical size and differences of the United States, many different dialects could be described; however, this paper does not deal with the description of these dialects because that could be worth another whole piece of research (9.*Figure*). Although one is interested in the subject, the following sources contain detailed descriptions of dialects and accents of North America: (Aschmann, 2016), (Delaney, 2013), (Heering & Nerbonne, 2002), (WIRED, *Accent Expert Gives a Tour of U.S. Accents - (Part One)* | WIRED, 2021),

(WIRED, Accent Expert Gives a Tour of U.S. Accents - (Part 2) | WIRED, 2021), and (WIRED, Accent Expert Gives a Tour of North American Accents - (Part 3) | WIRED, 2021).

The general American variety is spoken in nearly two-thirds of the United States and is also known as standard English. General American stands for a wide variety of accents that do not have too many obvious regionally distinctive features in them (Marshall, 2021).

One speech variety, although I would like to highlight it because later in this essay it will come up again, is a southern accent known as the piney woods belt. The surrounding areas in the south were historically non-rhotic; however, the piney woods belt has always been rhotic. Speakers of this variety have smoothed out the [aɪ] diphthong into a long [a:] monophthong. The process is called price smoothing; hence, in words such as rice, life, night, and right, instead of saying the [aɪ] diphthong, speakers pronounce the [a:] monophthong. In addition, the use of edged-focused tongue tips is typical in this area. So instead of using the blade of the tongue for articulating /t/ and /d/ sounds, speakers among the piney woods belt will only use the very tip of the tongue, which results in a more focused contact area (Marshall, 2021).



9. Figure: *The Map of North American English Dialects* (Labov, Ash, & Boberg, 1997)

4.3. Connected speech

It is probably obvious to anyone who speaks a language that language has written and oral forms. These two domains are more different than we might think. Since a sentence is made up of several significant words that together express the entire meaning, speech is fundamentally a continuous action in which individual sounds and their sequences carry no meaning. Speech cannot be said to be speech at all if it is disconnected or not continuous. The meaning of linked speech is derived from its numerous distinguishing characteristics, which are quite systematic. Continuous speech includes the correct and uninterrupted use of nouns, verbs, determiners, pronouns, prepositions, adjectives, and conjunctions. In addition to these, there are many other procedures that appear in continuous speech: assimilation of speech sounds; elision of the /t/ or /d/ sounds at the end of the word; liaison, linking words together with the final consonant to the following initial vowel, or the initial consonant is merged with the preceding final vowel; silent letters; and last but not least, intrusive sounds will be in focus (Akram & Qureshi, 2020).

4.3.1. Intrusion

Intrusion is a process with the help of which speakers can create smoother transitions between certain words by including a semi-vowel, such as (/j/ or /w/), in order to prevent hiatuses or gaps between the two words. An intrusive /j/ may occur when the word ends with a vowel and the following word's initial sound is a vowel as well. In general, a /j/ phoneme is added if the lips are in a spread position (Owen, 2020). The table shows examples of an intrusive /j/ sound:

<i>he is</i>	/hi: jɪz
<i>I agree</i>	/aɪ jə' gri:/
<i>I am</i>	/aɪ jæm/
<i>I ought</i>	/aɪ jɔ:t/
<i>they are</i>	/ðeɪ jɑ:/

(Owen, 2020).

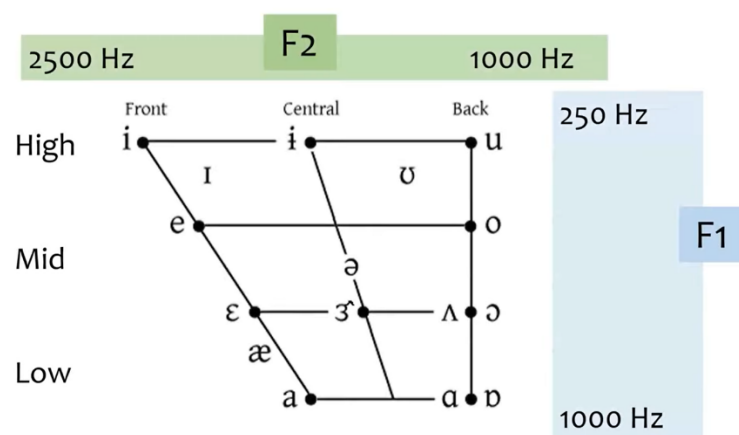
A similar phenomenon happens with the intrusive /w/ sound. The difference is that they are inserted when the lips are rounded at the end of the vowel and are followed by high back vowels, such as “*you are*” /ju: wɑ:/ (Owen, 2020).

4.4. Acoustic properties of speech sounds

In order to define the acoustic properties of speech sounds, there are a few terms that need further explanation.

“**Frequency** is a technical term for an acoustic property of a sound—namely, the number of complete repetitions (cycles) of a pattern of air pressure variation occurring in a second. The unit of frequency measurement is the hertz, usually abbreviated Hz” (Ladefoged & Johnson, A Course In Phonetics, 2015) (p. 15). The resonance of any dimension of a resonating chamber—the length, the width, and any other dimension—will have some impact on what frequencies it will facilitate when a speaker sends sound through it; therefore, depending on the speaker (male, female, or child), the resonance may change. In casual speech tone, a child has the highest frequency, and the male speaker has the lowest because of the length of the vocal cords. They are really similar to a piano or a guitar, where the longest and widest strings have the lowest frequency and the shorter and slimmer strings produce the highest. The frequency of vowels can be described on at least two scales: the first formant frequency (F1) represents vowel height, and the second formant frequency (F2) corresponds to vowel advancement (Ladefoged P. N., 2023) (10. Figure).

The IPA vowel chart and formants



10. Figure: Acoustic signatures of vowel sounds and their acoustic measurements. (Listen Lab, 2020)

Oral vowels resonate between 500 and 2,500 Hz; nasalized vowels, meaning that with pulmonic vowels, the air leaves the pharynx and the nasal tract and resonates between 400 and 2,000 Hz. In comparison, nasal sounds /m/ the voiced bilabial nasal resonates about 900–1,400 Hz, /n/ the voiced alveolar nasal about 1,650–1,800 Hz, and /ŋ/ the voiced velar nasal resonates between 1,900 and 2,000 Hz. Consonants resonate the most differently depending on the manner of the consonant: the energy of voiced consonants lies in the range of 250–4,000 Hz;

and that of unvoiced consonants varies considerably between 2,000 and 8,000 Hz. (Lander & Carmell, 1997).

However, the loudness of a particular sound may not change in the same way. Loudness is „the auditory property of a sound that enables a listener to place it on a scale going from soft to loud without considering the acoustic properties, such as the intensity of the sound” (Ladefoged & Johnson, A Course In Phonetics, 2015) (p. 316). Loudness can easily be changed with vowels and nasalized sounds because they are more powerful acoustically and more sonorous. Yet, the same characteristics do not apply to consonants, even though some with certain manners of articulation might be louder than others. If someone were to try to shout the voiceless velar plosive [k], they would not be able to do so because plosives cannot be pronounced continuously and the amount of air that travels through the articulators is specified; hence, there are no possible alternative ways to make them louder. Consequently, nasals and nasalized sounds are indeed loud to produce as compared to other consonants but not vowels, although compared to oral vowels, they are somewhat fainter.

“The **pitch** of a sound is an auditory property that enables a listener to place it on a scale going from low to high, without considering its acoustic properties. In practice, when a speech sound goes up in frequency, it also goes up in pitch” (Ladefoged & Johnson, A Course In Phonetics, 2015) (p. 25).

“The pitch pattern in a sentence is known as the **intonation**” (Ladefoged & Johnson, A Course In Phonetics, 2015) (p. 25).

5. Puppetry and linguistics: On the same page

At first glance, puppetry and linguistics are two completely distinct disciplines. Nonetheless, digging deeper, it can be said that there are connections and potential areas of overlap between the two. The language that puppets use is somewhat similar to human communication since the majority of puppet theatres or shows represent an already existing and spoken language and are performed by humans.

Although it is significant to highlight that the characters that are the subject of my analysis are not real human figures, they only have some human traits. Consequently, their language use cannot be analysed in the exact same way as human communication because the anatomy of the hand puppets is divergent from humans, meaning that the ratios of the head and its features, the body, and the limbs do not complement each other; thus, puppet characters would more likely behave like cartoon characters. Hand puppets are not made for mimicking every detail of humans or animals because that is nearly impossible, and the final outcome would probably be

something very disturbing and definitely could not have been as successful as the *Muppets*. Hence, hand puppets have their own cartoon-like appearance with human-like features, which obviously have some physical boundaries. When it comes to non-verbal communication, they are able to use some gestures with their hands, and they are capable of moving their bodies and rotating their heads to some extent. After all, hand puppets' facial expressions are quite limited, even though some are extremely flexible and expressive, such as Kermit, and some are equipped with a more rigid face. The latter provides an opportunity for various mechanisms of moving the eyebrow or blinking, if they are needed at all. In fact, examining puppets from the point of articulation, most of the puppets that Henson created have spread lips (11. Figure), which might cause a problem with lip synchronisation.

Now that these physical boundaries and other features have been presented, it is known what might be questionable points to analyse from a linguistic point of view. For my analysis, I sought out several experienced puppeteers for an interview. My questions focused on their puppets and the challenging features of operating those puppets. I also asked them about the voices and unique sounds or catchphrases they produce with their puppets and whether they needed to compensate for the lack of facial expressions in a puppet with their language use or voice.

Besides, highlighted characters from the *Muppet Show* and *Sesame Street* will be in focus to provide a detailed analysis of their specific language use. Thus, both the perspective of the performers and the perspective of the audience will be examined.



11. Figure: Fozzie Bear with spread lips (Henson, Frith, & Eickson, *Fozzie Bear Puppet*, 2023)

5.1. Interviews

For my research, it was necessary to conduct interviews with at least three experienced puppeteers. One of the reasons I opt to do interviews is that there is a very scant literature on the subject because the two disciplines seem quite distinct from each other, even though the fertile land of the merger of puppetry and linguistics opens various opportunities. Furthermore, the puppeteers' experience, practice, techniques, and enthusiasm entirely supplement the literature.

Once I had carefully planned the topics around which I would structure my questions, I joined several online puppetry groups. In these online communities, puppeteers and interested parties can share their thoughts, works, questions, and problems, whether it is practical or theoretical knowledge.

On that account, I posted my research topic and areas of interest. Multiple replies were received, from which I was bound to be selective to keep my research in focus. As a result, a total of five conversations were successfully arranged online and conducted as in-depth interviews during the research.

All five interviewees have decades of experience and are committed to their hobbies or professions. Four of the puppeteers live in the United States, and only one lives in Canada.

The table introduces the interviewees, their responses about themselves, and general information about them concerning the topic.

	Andrew Young	Sharon Johnson	Rachel A. Gates	Tim Giugni	Kris Bluett
Country	Canada	United States	United States	United States	United States
Age	not given	62	56	60	59
Years of experience	over 25	over 30	over 30	over 40	over 35
Target Audience	adults	children and families	families		schools, children
Field	special effect supervisor	has her own puppet show	teacher, used to be a character designer	object puppetry	tabletop puppets, hand and rod puppets
Other	has conducted research before	own puppet show; inclusive shows for children with disabilities	awarded as best character design; Tears of Joy Theatre	theatre background, camp	tells cultural stories

The questions posed can be broken down into three major themes, based on which I will summarise the answers. The three themes are: the same voice, different characters, the nasal tone, and last but not least, visual representation and lip synching.

5.1.1. Same voice different characters

One of the magics of puppet theatre is that one person can produce several different characters with their single voice. For that reason, the process of developing distinct characters with the same voice is quite an intriguing topic. The interviews revealed that puppeteers have some difficulties developing several characters' voices. It is something that puppeteers in the United States are not generally trained for. On the other hand, people with a theatre background have proper vocal training; hence, they can produce a large number of voices.

During the process of developing a character's voice, there are aspects to be taken into account. One is the personality of the character: who the character is, where they are coming from, what they need to express, and where they stand on the hierarchy. Another aspect that affects characters' voices is the emotion with which the particular line is told. In fact, voice changes with accent, dialect, and age as well.

As a matter of fact, characters can be categorised into many archetypes: the lover, the hero, the innocent, the monster, the guardian, the magician, the explorer, and many others. More nuanced tones are also created with the manner of speech: laughing, weeping, shouting, singing, and groaning. Therefore, a character is developed not only with their physical appearance, gestures, and body language but also with their way of speaking, which determines just as much, if not more.

The average of my interview respondents stated that they can confidently create about three distinct voices for their characters, and they do not consider themselves strong voice actors.

The majority of the responses agreed that when developing different sounds, they use their own voice, meaning that they do certain voices on a higher or lower pitch without changing their voice. One of the puppeteers stated that sometimes it is challenging to maintain a particular voice for several minutes, and she finds herself switching into her own regular speaking voice or even other characters' voices of hers.

One of Sharon Johnson's puppet characters is a boy with Down syndrome, which is visually represented by having a bigger tongue for the puppet. Moreover, a slight difference can be recognised in the puppet's speech because it is a really childish voice full of excitement, quite distinct from the other characters from the puppeteer.

Tim Giugni, who has a broad repertoire of character voices, reported about the manner of articulation for several characters. Various accents and vocal inflections create many recognisable, unique character voices. A higher pitch of voice is produced by constructing the back of the throat at the larynx. For a lower or deeper voice, some of the chest is tightened, and for an even deeper voice, the stomach muscles are tightened and the larynx is lowered; therefore, the cavity in which the air leaves is bigger, resulting in a deeper voice.

I have to note that these processes usually do not come naturally; voice actors are trained for years in order to be able to produce these sounds. Most of these tones do not cause discomfort to maintain and are safe to articulate, although some changes of pitch and voice sometimes come with temporary damage to the vocal cord. After producing the problematic tones for several hours for filming or performing for a show, the puppeteer is not able to speak properly or without pain because of the temporary damage that the particular tone caused.

In addition, the majority of the puppeteers agreed that the usage of unique sounds, which are not necessarily part of speech, plays a powerful tool in the development of the character and for the audience to get to know and understand the persona of the puppet. Some even noted that these sounds make it easier to find the voice for the puppet. Among these unique sounds are onomatopoeic and evocative sounds, words, various laughs, squeaks, and inflections. The following footage from the America's Got Talent show provides a great example of the unique way of using glottal stops: (America's Got Talent, 2022). In addition, the character Achmed, performed by Jeff Dunham, uses plenty of vocal inflections and squeaks in this recording: (Laugh Society, 2023).

Moreover, many of the puppeteers use pre-recorded or live music; however, silence has its crucial value as well.

Catchphrases, on the other hand, are not that popular, and conflicting opinions are expressed about them. Some say that catchphrases hook the audience very quickly and are points of identification. On the contrary, some think that certain catchphrases instantly break the world that was created for the show, and they drag people back into reality that has grown somewhat jaded.

	Andrew Young	Sharon Johnson	Rachel A. Gates	Tim Giugni	Kris Bluett
number of different voices	2-3	3-4	3	7+	2-3
voice	Who the character is, where they are coming from, and what they need to express.	Uses her own voice, but on a higher pitch for some puppets.	Uses 3 archetypes. Nobody is really changing their voice. Voices changes with the emotion, accent age.	Experimenting, how it reacts with others.	Two different voices: bird's (high) whinny voice, horse (low) deep, harsh voice laughter, wheeping, shouting, singing, and groaning) uses her own voice on a different style/ tone.
pre-recorded tracks	yes	yes	-	-	yes
unique sounds	-	-	stamping, giggling, screaming, whistle, nonverbal sounds but not speech	Squeaks and inflections, tries not to do words at all, but uses music and sounds or simply silence.	Laughs squeaks cartoon sounds onomatopoeic and evocative words
catchphrases	During the process of developing a character, it is easier to find the character of the puppet. They hook in with the audience very quickly. catchphrases: identification point	Untypical	Catchphrases: danger; it can kick the viewer out of the world that the puppeteer created (not to break the spell) but depends on the character.	Untypical	Untypical
accent or dialect	avoids sounds that would make fun of different countries' accents	Southern: North Carolina accent for a character, but not making fun of anybody or anything.	-	Accents are vocal inflections.	-

5.1.2. The Nasal Tone

In the interview questions, I only included a single question about nasalizing—whether it is a common phenomenon during voice production for a character. Before receiving the answers, I assumed that it was common, or at least a safe technique to have, for more voices in the repertoire. Seeing many episodes of the Muppet Show, the Sesame Street, and the Muppet Movies, there are quite a lot of characters whose voices are nasal: Miss Piggy, Fozzy Bear, Sam Eagle, The Swedish Chef, and Bert and Ernie from the Sesame Street. Therefore, I had the preconception that nasalizing was habitual.

However, puppeteers overall reported mixed feelings about nasal tones. It is frequent in the manner of finding a new character and experimenting with different voices and sounds, including nasals on different pitches. So, it is very useful to bring to light new characters' voices and to discover a character's personality. Nasalization is also included in routines that are easy to project because they are loud in cases where it is not possible to use sound equipment.

Puppeteers with no proper vocal training mostly agreed that it is challenging and sometimes a struggle to maintain a nasal voice for minutes. This result was surprising because, in Jim Henson's films, nasalizing seems like an easy and sustainable way of producing voice. Although I have to note that every puppeteer who played the Muppets had to have several years of proper training to play a major role in the show.

The procedure is used by puppeteers when articulating nasal tones for several minutes or even hours without stopping. Even maintaining the nasal tone for a few minutes can be uncomfortable because the velum is not raised in a natural position, or at least not for such a long time. For that reason, puppeteers say it is challenging, and sometimes they slip into other characters' voices.

Since my interviewees are native English speakers and some of them do not speak any other languages, they do not use sounds from other languages. For instance, there are several languages in which nasals occur voiceless, as opposed to the majority of the languages, including English, in which nasals are always voiced consonants. Throughout the interviews, I was not given an example of the usage of voiceless nasals, although I did not expect to hear such a sound because they occur only in rare cases.

In fact, Miss Piggy's character nasalizes a lot, not only because she is a nasal character but also because she uses French loanwords. The French language is considered one of the world's languages with the most nasalized vowels.

On the other hand, nasalizing might be common for a properly trained puppeteer, voice actor, or professional singer as well. A nasal sound in singing might be an outcome of wanting to add a new, unique tone to the singing.

Andrew Young	Sharon Johnson	Rachel A. Gates	Tim Giugni	Kris Bluett
common but not sustainable	struggle to maintain	has a nasally character	not that many characters are nasal	easy to project because it is loud
uncomfortable to maintain for several minutes	helpful to develop new characters			has not experienced problems producing it
helpful to develop new characters				

5.1.3. Visual representation and Lip Synching

In designing the interview questions, a lot of emphasis was placed on the issue of how realistic a puppet should be. Obviously, a muppet-type puppet that is made out of a somewhat rigid material will not be flexible; hence, in certain forms of metacommunication, the number of facial expressions is very finite. So the question arises: is there any need to compensate for the lack of facial expressions?

First, the purpose of the puppet has to be taken into consideration. During the process of designing a puppet, there are features that the puppet is purposefully designed for. So anything else would require building or rebuilding a new puppet with those features for the same character. As a matter of fact, an overly expressive puppet comes with certain drawbacks. Multiple buttons and triggers on the puppet often make it difficult to control it, as they are all extra elements to pay attention to during a performance. The split attention may result in movements and gestures that are not properly implemented, thus not being visually appealing. Therefore, limitations can become advantages since they provide a field for imagination as well. A great example that I was given is a grumpy old man with wrinkles who does not necessarily need to smile because it would be completely out of his character, so it is not his purpose to do such a thing. Despite the fact that puppets are not supposed to reflect or copy reality, they are expected to work according to everyday physics. If it is not fulfilled, they will be more reluctant to accept it and less engaging for the eye.

On the other hand, there are techniques that help the audience engage more with the character by balancing out the lack of facial expressions. To eliminate this issue, unique voices, uncommon sounds in the English language, and onomatopoeic sounds are used not only for developing the character but also to make it more complex. Also, a stronger and more expressive intonation is applied and overlapped with other movements and gestures. A physical gesture is used when the puppet's mouth is slightly open so that it is similar to a smile; however, when the mouth is fully closed, the puppet appears more serious.

I also learned from the interviews that the proper way of moving the mouth plate is not only opening and closing it but also taking control of the whole body of the puppet; otherwise, it becomes shaky, and this would suggest the character is angry or uncontrollable.

Another phenomenon to be discussed in this field is lip synchronization. Overall, puppeteers agreed that a puppet is not expected to mimic every aspect of human articulation. Nevertheless, the performers I interviewed had already mastered the various techniques that I was introduced to. One of them was a fast-speaking puppet that did not need to form every

single syllable because it would give the impression of an uncontrolled puppet and would be unpleasant to the eye in the long run. This is considered the wrong technique not only for the poor visual experience but also for the lack of body language that the appropriate techniques would allow. Instead, the mouth of the puppet opens less than the actual syllables would be produced by a human. A great example, which I was given, is the word Mississippi. So, instead of opening the mouth four times to enunciate every single syllable, they only open it two times. Interestingly, the two mouth closures do not mimic the movement of the lips, with the closure at the /m/ and /p/ consonants, but rather emphasise the intonation of the word by closing the mouth at the stressed vowels.

The articulation of the /o:/ and /u:/ sounds is challenging for a rigid-faced puppet. Most often, the muppet-type puppets are made with a spread mouth plate, so the formation of a rounded vowel or whistle is nearly impossible. Even so, is it an essential component of a puppet?

The Uncanny Valley Theory can be a possible answer to this question that one of the puppeteers gave me as an example. Since the aim is not to make something repulsive or unpleasant to look at, the creation of a character also takes into account how lifelike or realistic it should be in order to avoid the uncanny valley.

Puppeteers agreed that puppets do not need to be overly humanlike because that would be too unnatural and disturbing. They only want to create the impression of life and the impression of speech because people believe more when something is more abstract. On the other hand, when the aim is to create a creepy character, they purposefully plan and develop that character to fall into the uncanny valley.

The uncanny valley can happen not only with the visual appearance of objects but with synthetic voices or even acted speech. There is a possibility that music and synthetic sounds slip into the category of the uncanny valley. They are often used in horror movies to disturb the audience, or even in videogames. So why could not that happen with human voices as well? It is certainly possible to produce blood-curdling sounds for a character. It even happens that some of the characters' voices are created in such a way that they slip into the uncanny valley because they might not work well with their appearance. Although it can happen purposefully, just like in horror movies, a character's voice is intentionally creepy.

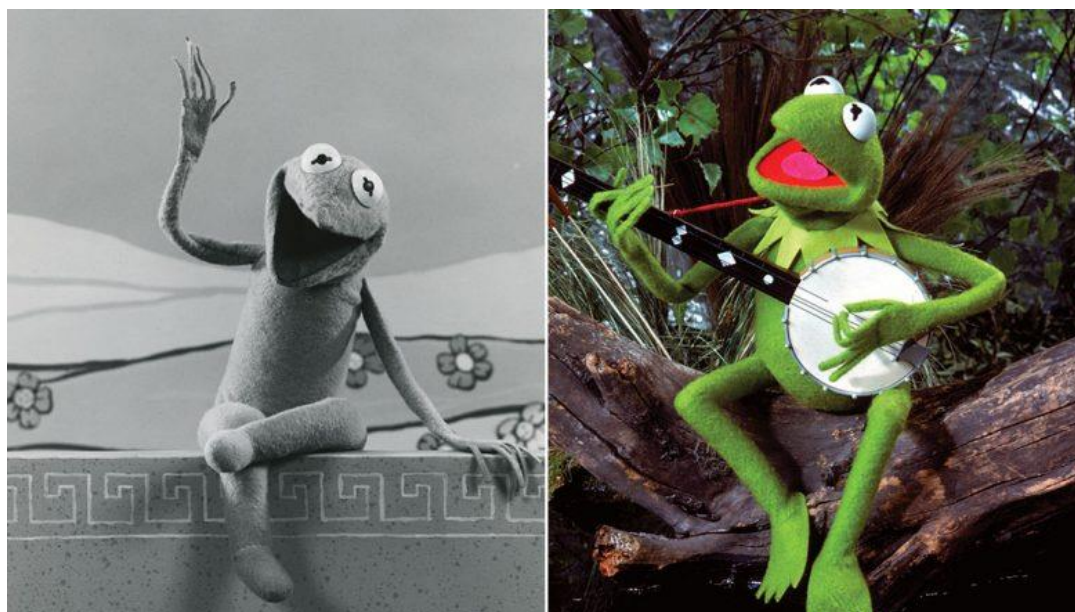
articulation of /o:/ and u:/ or whistle			lip synching		compensation with voice		compensating lack of facial expressions	visual representation		
uncanny valley theory	a puppet is the impression of life, not a recreation	can be a problem	abstract lip synching creates the impression of speech				an overly expressive face might be distracting	limitations can become advantages	how the design serves the puppet	Andrew Young
not a problem if the puppet does not mimic it			Mississippi example		not necessary because gestures and body language help it out		anger: with stringer, more expressive intonation, movements, throwing things	how to express anger while the puppet is designed to smile		Sharon Johnson
not a problem if the puppet does not mimic it			not a problem is a puppet cannot mimic human articulation	lower jaw moves	gives place for voices, sounds, and gestures	limits give place for imagination	other movements complement and overlap the sounds	physics have to be realistic, but faces do not have to be		Rachel A. Gates
not a problem if the puppet does not mimic it							-	it is built for that specific character (e.g. a grumpy old man would not necessarily be able to smile because that is not part of his character		Tim Giugni
not a problem if the puppet does not mimic it			leaving the mouth open invites talkback		usage of onomatopoeic sounds	voices and sounds (especially shouting) do not have to be the majority or overdone in some situations	with gestures and movements	-		Kris Bluett

5.2. Characters

The selection of each character was based on the diversity of the language used by that particular character. From this perspective, not only two characters should be highlighted, and indeed, there are several other characters besides Kermit and the Count that could be examined, among them Miss Piggy, who uses French loanwords in addition to nasalization. Moreover, Bert and Ernie are fascinating characters to examine not only because of their unique nasally tones but also because of the dynamic interplay of their friendship, brimming with suave humour, which is an intriguing topic of study from a linguistics point of view. Besides, other studies have previously examined the complexity of Bert's language use, among many others, which is described in detail in this paper: (Nangia & Bowman, 2019).

5.2.1. Kermit

The early Kermit in *Sam and Friends* in 1955 used to look quite differently than in the *Muppet Show*. Kermit was a lizard-like character made out of an old coat of Jim Henson's mother, and it was only later developed into a frog with a brighter green colour and additional collars (Finch, 1993) (12. Figure). The puppet itself is very simple; there are no mechanisms, buttons, or triggers, not even a rigid frame; it is often considered a sock puppet with arm rods. Although this sort of simplicity is not true for controlling the puppet, due to the frameless base, the only thing between the puppeteer's hand and the outside world is a single layer of fleece, which makes the puppet extremely flexible and expressive. Every little movement of a finger or the whole hand is a new gesture or a different facial expression; therein lies the complexity of the puppet. Also, it is often considered a sock puppet with arm rods.



12. Figure Kermit in *Sam and Friends* on the left and in the *Muppet Show* on the right (Fanning, 2013)

Kermit's character is the engine of the *Muppet Show*. It is his responsibility to corroborate that everything goes well during the show, that no disasters happen, and that all the viewers and characters survive the week. In later films, Kermit retained the core of his character and played the role of Bob Cratchit in the *Muppet Christmas Carol* in 1992 (Garlen & Graham, 2009). Because of his central position as the director of the show, he is a leader-type character. This manifests itself in both the structure and the language used by the puppet.

As a sock puppet, he seems very simple; however, his expressive means are exceptionally broad. The puppeteer can contort his face into an actual smile, just as easily as into a visage of worry or even a look of contempt. Other *Muppets* with a more rigid base material for a face, like Fozzy Bear, have a more limited number of facial expressions. Most of it comes from the mouth opening and closing at certain heights. There might be additional buttons and triggers for further moveable parts inside the head, for instance, the movement of the eye or an eyebrow lifting. All mimicry is eked out by body language and different sound effects.

However, the blatant fact about the immense differences between *Muppets'* number of expressive means cannot be ignored. For that very reason, it indicated a process of in-depth scrutiny by including this matter in the interview questions: Is there any need to compensate for the lack of facial expressions? The received answers show a pattern of similarity. The most important factor to consider is: what is the purpose of the puppet, what is it made for, and what are the specific movements it needs to do? All the issues in question are considered in the process of designing a puppet. Which is why several differently-built puppets are made for a single character to fulfil specific objectives. Furthermore, the personality of the character is also a determining factor. Since Kermit has a leader-like persona, he has to carry great responsibilities on his shoulders. He is not only giving instructions to his employees but also hosting famous stars who visit the show (Dale & Foy, 2015). The complexity of his character is apparent both in the structure of the puppet and in his language use. As a result, he was designed to fulfil the purposes he was determined to: a complex and expressive puppet. The same regularity applies for any other character. Hence, there is no need for compensation for the lack of facial expression because the puppets have already achieved what they were supposed to. Obviously, this does not mean that no sound effects or irregular speech sounds are used. Voices and sounds are supplementary, regardless of character or puppet type.

Further examination of Kermit's character reveals that he speaks General American English. His way of speaking fits into his character since it is not a rare phenomenon that people who appear on television with a strong dialect or an accent simply abandon their original speech variety. Although the term General American is quite broad and does not specify regional or

social varieties of American English, even though dialects are quite distinguishable in the pronunciation of some sounds.

The analysis of Kermit's dialect showed that he speaks a rather standard variety of English. Notwithstanding, there is a recognisable phenomenon in his speech: the use of Tongue Tips. This form of articulation is extremely edge-focused, meaning that the very tip of the tongue touches the alveolar rather than the wider blade surface of the tongue. The southern dialect from the Piney Woods Belt presumably originates from Jim Henson being born in the South, and he somewhat kept his accent in his famous character. Above all, Kermit has a slight nasal tone, which also relates to Henson growing up in Maryland. Nasal pronunciation of certain vowels is also a common feature of the Mid-Atlantic region in Maryland (Aschmann, 2016).

Throughout the years, several performers played the character of Kermit: Henson from 1955 until his death in 1990. After the death of Jim Henson, Steve Whitmire took over Kermit's role for 27 years and was fired by Disney. Since 2017, Matt Vogel has been performing Kermit (Santiago, 2017).

During the *Muppet Show*, Henson created Kermit's voice as a rubbery, energetic, lively, and kind-hearted character's voice with a little nasal tone. Compared with the early Kermit in *Sam and Friends*, it is more down-to-earth and less cartoony (UnmissableMovies, 2020). When Steve Whitmire took over the role, Kermit's voice somewhat changed since the two puppeteers did not have the same voice. Whitmire did a very good impression of Henson's Kermit voice, but on a much higher pitch (UnmissableMovies, 2020). Perhaps one of the most interesting aspects to consider on this topic is whether Kermit's dialect has changed due to the performer replacement. Whitmire grew up in Atlanta, Georgia, which is also considered a southern accent, so there is not too much difference in the voice production. However, the tongue tips, which were one of the characteristics of Henson's Kermit voice, cannot be heard when Whitmire performs Kermit. Since Matt Vogel took over the role of Kermit, there have been recordings almost identical to the original Kermit and also some footage that is probably the furthest from Henson's Kermit voice. In this recording, the pitch, the voice, and the tone are nearly identical to the original Kermit; even the same nasal tone can be heard (The Muppets, 2018).

On the other hand, in the following recording, Kermit's voice sounds like a completely different character: (Attractions Magazine, 2021). Even though most of the aspects of the unique pronunciation are preserved, the character sounds differently. Consequently, it can be said that some features of pronunciation, whether they are dialects or accents, can be imitated along with voices.

5.2.2. The Count von Count

The Count is a mysterious, friendly, and well-known character from the children's show *Sesame Street*. The vampire-looking character, as his name suggests, loves to count. He was performed by Jerry Nelson from 1972 to 2012, and later Matt Vogel took over the role from 2013 until today (Stevens, 2023). The Count's character was based on the original vampire, the main character of the *Dracula* (1931) movie, who was played by the Hungarian actor Bela Lugosi. His performance was used as the basis for creating the Count: both his visual appearance and how the actor played with his voice. As it can be found in the National Museum of American History's online collection, "The Count began as a parody of Bela Lugosi's film portrayal of the vampire count Dracula." (National Museum of American History, 2013).

The possible reason for Lugosi being a subject of parody is his non-American, or, to be more precise, Hungarian, accent. Even though the Muppets caricature Lugosi's performance, the fact cannot be ignored that the movie was a huge success, which is still very evident today. As Rhodes writes in his study, "Lugosi's prominence as Dracula attests to the power of cinema, the power of his persona, and the power of mimesis. Those who will dress as Dracula to celebrate Halloween will imitate Lugosi's look and voice, even if they do not know Lugosi by name." (Rhodes, 2022) (p. 29). The very same phenomenon was expressed by one interviewee when he was working on a vampire puppet voice: "it was very challenging because of the Count. The Count is such a famous character in popular culture. It's very hard to do something with a puppet vampire that doesn't start to feel like the Count... The way Bela Lugosi created a caricature of what a vampire is" (Young, 2023). But what are the elements that have given Bela Lugosi's performance the identity of the vampire character, including the Count of *Sesame Street*, to this day?

For the answer, probably the most reliable source to look at is the *Dracula* (1931) movie itself. Lugosi's use of language in the role of Dracula slightly changes compared to the way he speaks in civilian life. Lugosi often uses intrusive /j/ sounds in his everyday communication, which is also present in the role of Dracula. The /j/ can be heard in an *Intimate Interviews* conversation with Dorothy West when he says "I am" (Historycomestolife, 2010) (00:01:01). In the very same video, we can hear that he abandoned the typically Hungarian tapped or flapped [ɾ] and pronounced the approximant [ɹ], favourably used by American English speakers (Historycomestolife, 2010) (00:01:15). The pace of his speech is noticeably faster than that of the character in the film and much less measured. Still, his imposing, unique intonation was preserved. As for his language use in the film, the intrusive /j/ remained (Browning & Freund,

1931) (00:10:06). Due to his Hungarian mother tongue, he pronounces the /r/ sounds in a very specific way, as a flap or a tap [ɾ] instead of the usual approximant [ɹ] American pronunciation in the following examples: “Children of the night” (Browning & Freund, 1931) (00:10:48), “The spider spinning his web for the unwary fly” (Browning & Freund, 1931) (00:11:36), and “We will be leaving tomorrow evening” (Browning & Freund, 1931) (00:14:25).

Above all, Lugosi created a distinctively unique intonation for the character of Dracula, which is expressed at the level of sentences as a continuous rhythmic alteration of low- and high-pitched intonations in a singing-like manner. A more precise description, however, can be provided by examining certain words or phrases that make Dracula’s intonation idiosyncratic. The technique is to strengthen the intonation of a word within the sentence, often to overstress the already stressed syllable of the word. This happens with the word “excellent” (/ˈeksələnt/) when the already stressed first syllable is overstressed (Browning & Freund, 1931) (00:13:30). A similar phenomenon can be observed with the word “evening” (/ˈiːvniŋ/) with the addition that he not only over-stresses the stressed syllable but makes it much longer and slower (Browning & Freund, 1931) (00:14:30).

The Count of *Sesame Street* tried to mock both Lugosi’s physical appearance and his voice acting. *Figure 13.* depicts Bela Lugosi as Dracula, and *Figure 14.* shows the Count puppet. Comparing the images of Bela Lugosi as Dracula to the Count, quite a number of similarities can be noticed. As regards their physical appearance, the facial features are the most similar. Perhaps the most striking affinity is the shape of the eyebrows—the inverted V-shape. The hairstyle and the shape of the nose are also common features in both characters that the puppet mocks. There is indeed a correlation between the clothing of the two vampires, as they both wear black robes with raised necks. The only distinct features are that the Count wears a monocular and has a goatee.



13. Figure: Bela Lugosi as Dracula from the movie *Dracula* (1931). (Bociaga, 2022).



14. Figure: Count von Count Puppet (1994). (National Museum of American History, 2013).

During the examination of the Count's speech, I am going to refer to the performance of Jerry Nelson. Examining their speech, it can be described that the pace of the puppet's speech is much faster than Lugosi's and that the puppet is not as measured in movement or in speech as Lugosi's performance in the film. However, the intonation is quite similar because the same rhythmic alterations between low- and high-pitch can be recognized. Furthermore, the Count retained several aspects that Lugosi developed in his speech as Dracula.

A video clip on the internet is a good illustrative tool to show how several aspects of the puppet's speech were preserved. The Count retained the intrusive /j/ sound, which is heard in the sentence "I am called the Count". The same sentence in the video is, in fact, an example of a unique way to give stress to certain syllables. However, the technique is not the same because Lugosi often overstressed the already stressed syllable, but in the case of the Count he mostly abandoned the phenomenon except when he says, "I am called the Count" he pronounces a fully released emphatic voiceless alveolar plosive /t/ at the end of the word, creating quite an unusual intonation. In the same excerpt, the tap or flap [ɾ] is also easily recognisable because it is perhaps one of the strongest features of the character, particularly recognisable in these words and phrases: "carried away", "really", and "faster". There is an additional feature that the Count does and Lugosi does not, namely that the Count does not aspirate the /t/ sounds at all. The phenomenon is very present when he counts and pronounces "two" or "three" (Sesame Street, *Sesame Street: The Song of the Count*, 2012) (00:00:03-00:00:53).

On top of that, the Count's laughter is also a very characteristic phenomenon because the /h/ sounds often turn into a glottal stop, which is followed by the /a/ sound: (Charley Dracula, 2019) (00:00:00-00:00:03) and also in: (Sesame Street, *Sesame Street: The Count Counts to Twenty*, 2015). That is again another feature that makes the Count a unique and easily recognisable character because of its rarity. On the whole, it can be said that there are indeed similarities between Lugosi as Dracula and the Count, both in physical appearance and in voice. Therefore, it is not unfounded to say that the Count mocks the famous but unusual Dracula character.

Conclusion

The topic of my research is the relationship between puppets and language, focusing on hand puppets, or muppet-type puppets, and their use of language in more detail.

My hypothesis that puppets reach their physical boundaries and, from that point on, are helped by various linguistic tools was confirmed by the research. The interviews revealed various methods of developing different characters with a single voice, along with the linguistic characteristics of how they are articulated. Depending on the type of character that puppeteers form, different vocal organs are tightened or loosened; for example, by tightening the larynx, a higher, thinner sound can be formed, known as vocal inflection; moreover, even squeak-like sounds can be produced using the same technique. Also, it turned out that nasalization can be very useful in the character creation process but is not necessarily popular as a character voice, despite the fact that it is easy to project. In addition, the overall view of the interviewees was that voice is not a compensation for the creation of the character when it reaches its physical boundaries but at least as fundamental an element, if not more so, than any other characteristics of physical appearance.

The language use of Kermit the Frog from the *Muppet Show* was examined in terms of all three puppeteers who have performed him. As a result, it can be said there are quite many similarities between the puppeteers' voices of Kermit's character (voice, style), but not all aspects of his speech can be imitated, such as the usage of tongue tips, which is an acquired place of articulation, especially at an early age.

The Count von Count, performed by Jerry Nelson, from *Sesame Street*, whose character originates from the villain of the *Dracula* (1931) movie, played by the Hungarian-born Bela Lugosi, were compared in terms of their language use. As a consequence, many of Lugosi's unique ways of speaking were preserved. Although the puppeteer tried his best to impersonate Bela Lugosi's Hungarian-English accent, not all of the features can be imitated, as interviewees reported that some characters may slip back to other character voices or even to their own voices. Mimicking an accent or dialect over the long term is quite strenuous to maintain consistency since it is not natural everyday speech.

Thus, the study not only explores a specific topic but also contributes to the methodological and substantive richness of theatre and linguistic research in a broader sense, helping to understand the closer link between artistic expression and linguistic phenomena.

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