WHAT YOU LEARN IN THIS CHAPTER

In this chapter, you will learn about some recurring themes in the study of Language. You’ll learn about the domains across which the unconscious rules of Language in our brains operate, and what aspects of language use belong to each of those domains. As native speakers or signers of some language(s), you all have an amazing wealth of knowledge regarding how language works, through you’re likely not even aware you possess this knowledge. Throughout this text, you’ll learn how to recognize and use this knowledge to learn even more. Additionally, you will learn how the study of Language is facilitated by the study of languages, and how this study can be approached scientifically, following some principles similar to those used in other sciences.

Introduction

What is Language, and how do we study it? This is a big question, and it’s the question that this textbook sets out to both show you and actively engage you with. In the preface, we motivated the study of Language from a broad perspective – Language (with an upper case L, which we distinguish from language with a lower case l in the next section) is the means by which we engage the world and understand our place in it. Language isn’t a random collection of sounds or symbols thrown from one person to another, but a predictable and patterned collection of specific elements that can be studied in a similar way to many other sciences, like biology, or chemistry, or physics. This chapter will address the two big questions above – What is Language? How do we study it? – in turn, setting the stage for the subsequent chapters, in which you will learn how to engage with language scientifically; that is, you’ll learn how to think like a linguist.
What Is Language?

When we ask the question, “What is language?” a few thoughts likely immediately emerge. The first is that there are different meanings for the word *language*. We are all speakers of specific languages, like English, Spanish, Swahili, Mandarin, Navajo, Tamil, etc. There is likely someone else reading this text right now whose native language is different from yours! However, despite the fact that we all speak different languages, we’re all doing something similar in the way we do this capital L Language thing. Let’s start by asking the question, what is (capital) Language, and then turn to the question of what makes individual (lowercase) languages unique.

**CONSIDER 1**

What is Language? What are the crucial characteristics that you think make up Language? Try to respond by answering questions like, “What is Language for?” “What do we do with Language?” “How does Language work?” “Why does Language exist?” and “What is Language made of?”

I expect that your brief exploration of the nature of Language revealed at least some of the characteristics described below. (These are organized somewhat intentionally across two dimensions. The first three address more directly the why of Language, and the last five address more directly the what of Language.)

**Why Language Is**

We use Language to communicate with each other. When we think about how language is used and for what purpose, we realize that most often we don’t just talk to ourselves, but rather, we use Language in order to communicate things of importance (and sometimes things of little importance) to other people.

We use Language to record significant events in history. If we didn’t have Language, we wouldn’t have a record of those people and things that came before us. One of the uses of Language is to record important things for posterity.

We use Language to teach people things. Again, if not for the verbal, signed, and written documentation of the achievements of those that came before, we would be stuck reinventing the wheel again and again. We currently use Language in order to tell others how to do things – whether it’s to explain how to hang a new light fixture or give directions to the nearest electric vehicle charging station.
What Language Is

Language is often, but not always spoken. There are signed languages like Nicaraguan Sign Language, American Sign Language (ASL), British Sign Language, Ethiopian Sign Language, and some two hundred others. Also, many folks tend to think of language and writing as inseparable, but there are plenty of languages used around the world that have no written form; in fact, Ethnologue suggests that just over half of the world’s 7,000 languages do not have a written language.

Language is made up of words, and spoken words are made up of sounds. When we think of Language, our minds often start by thinking of words and the meanings that we communicate through use of those words, but it’s clear that those words are themselves composed of smaller parts, like sounds. Signed words are also composed of smaller parts, like handshape and movement and location. And if we go in the opposite direction, we note that words themselves make up bigger units of language, like phrases and sentences.

Language is a means of transferring thoughts from one mind to another. Language is magic! We can’t think thoughts to one another, but we can implant thoughts in another person by saying or signing words at them.

Words are weird

With arbitrary grunts & moans I can implant an idea directly in someone’s brain.

Giraffe pimp.

I refuse to use this power wisely.

Figure 1.1 Language allows access to someone’s brain
(Image courtesy of John McNamee. Used by permission.)
1 Introducing Language Analysis

*Language is systematic.* There appear to be some organizational rules that languages follow. We see some similarities across otherwise very diverse languages. And within one language, we might notice that there are patterns involving how the words or sounds or sentences are organized. We create new things with language by following the same organizational rules that the rest of the language appears to use. Another way of saying this is that language appears to be productive.

*Language is variable.* There are lots of different languages, and there are lots of differences within a single language. For instance, English sentences typically start with Subjects (do-ers of verbs), but Irish is a language where sentences start with the verbs instead! In Castellano (Spanish spoken in Spain) and Latin American Spanish, there are two different words that mean 2nd person plural (y’all, in English): *vosotros* and *ustedes*, respectively.

**CONSIDER 2**

We wrote about how one of the functions of language is to transfer thoughts from one brain to another. Do you think we use language internally as well? That is, what function does language have if not across speakers? Do we think in language? Can we separate conscious thought from language as a means of encoding and making sense of those cognitive processes? Give examples of ways that thought might exist distinct from language.

All these things are true of Language, but the more we think, the more we add to this list, and we note that a definition for Language encompassing them all would become quite burdensome. Could we sum up these points into a concise definition? One possible definition for Language which gets at many of the observations above is that it is a system of unconscious rules which governs the organization of communicative units, though that description leaves out a discussion of its purpose or function which are surely important conversations to have regarding Language. This book focuses on how we can approach the study of Language as scientists, which means we’ll highlight the predictable organizational aspects of Language knowledge. Although social and functional aspects of Language use can also be studied analytically and quantitatively using the scientific methods developed and practiced in this text, the main focus here will be on Language (and languages) itself. The variability across languages despite the similarities in both organization and composition for all languages can be illustrated through an analogy of my favorite food.
Languages Are Cookies

I (Jordan) love cookies. Pretty much all kinds, but my favorite are derived from the classic chocolate chip cookie. I made so many different kinds of cookies in my youth that I started to notice some patterns. Every cookie recipe had some flour thing (although during my gluten-free experiment I noticed that not all flours have the same base ingredients). Every cookie recipe had eggs (but I once made cookies for a vegan friend that used flax seed instead). Every cookie recipe had a fat (I’m a big fan of \( \frac{1}{2} \) butter, \( \frac{1}{2} \) shortening). Every cookie recipe had a raising ingredient (baking soda and baking powder being the top options).

While all the cookies I made fit into the above framework, each recipe is unique as to what ingredients, and how much of each are to be used. Furthermore, the recipes vary along the dimension of directions – how are the ingredients to be mixed together? Do you do all the wet ingredients first and fold that mixture into the sifted-together dry ones? Do you just put them all in a bowl and blend until the lumps are gone? The end result of these different ingredients in different amounts, combined in different ways, cooked for different amounts of time at different temperatures is a vast diversity of cookies: chocolate chip cookies, oatmeal lace cookies, snowcapped mountains, peanut butter doo-dads, and on and yummy on.

Likewise, a vast diversity of languages are spoken around our world. They look very different on the surface, but they were all developed following the same general elements and organizational principles. Recall the differences discussed previously between big L Language and little l language. Cookie is a big L Language concept. Cream cheese chocolate chip cookies are in contrast a little l language. The more I learned about cookies, the more I was able to apply those principles to making specific cookie recipes. The more specific cookie recipes I mastered, the more I learned about the general principles of Cookies. Language is the same way.

Each language is unique and specific, unlike any other. But all Language is overall the same. If we focus too much on what all Language has in common, we might not recognize some of the cool individual quirks each language has. But in contrast, if we’re only looking at each language in isolation, we’ll miss out on the overriding characteristics that all Language has. In this text, we’ll explore individual languages, recognizing what makes them unique and interesting, and also highlighting the ways in which some of their characteristics reveal larger truths about Language.

We’ve used above the analogy of Language as Cookies. Running with that for a moment, let’s turn now to address what those ingredients of Language are and what the general organizational principles are which govern how those language ingredients are combined.
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CONSIDER 3

This text uses the admittedly flawed analogy of Language as Cookies. Sometimes it’s helpful to reframe our understanding of a topic in an entirely new conceptual domain – it can help us to see what we understand and how we understand what we think we understand. What kind of analogy, other than to baking cookies, could you use to describe Language to someone without a linguistics background? As you continue to read through this introduction, can you incorporate the new information into your analogy?

Modules of Language

In linguistics, the ingredients of Language are called domains or modules of grammar. The term grammar might best be compared to the directions for mixing together elements of cookie recipes, but see the discussion below for more detail on this term and some difficulties it brings up. These modules are arranged below from smallest to largest. (This is also the order in which these aspects of grammar are addressed throughout the text, in Chapters 2 to 4.)

Sounds

There are two domains of grammar which focus on the study of sounds. We can think deeply about the sounds themselves, their physical and physiological properties, and we can use that knowledge to explore more about sounds in systems, that is how languages use those sounds to make larger communicative units, and how both our mouths and minds put those sounds together. These two domains will be discussed in tandem in Chapter 2.

Phonetics. Simply put, most humans do language by saying noises at one another (though many do so through visual signs, as we noted above). In spoken languages, phonetics is the study of those noises, also called speech sounds. These smallest ingredients vary from language to language, but phonetics is the study of all the possible sounds out there. Some central questions of phonetics include: How are speech sounds created by the speech-making apparatus? What are the physical characteristics of the sounds that get created by human voices? How do we describe and categorize those speech sounds?

Phonology. We don’t say sounds in isolation. Wouldn’t it be weird if someone came up to you and just said “ffff”? Phonology is the name for the study of the rules that govern how those sounds get stuck together (how the ingredient sounds are supposed to be mixed together according to the recipe directions for each individual language). There are some patterns that we see emerging in the rules of different languages – sounds combine in predictable ways, and when
they do, we see similar patterns of variation in how they actually come out of our mouths, often distinct from how we think of the sounds in our brains. In Chapter 2 you’ll learn how to spot those patterns just by looking at words in specific languages.

Do you see the relationship between the above two domains? Phonetics gives us the sounds themselves, in isolation. Phonology tells us how those sounds are intended to go together within any particular language.

Structure
There are two domains of grammar which focus on how the meaning-carrying parts of language are organized with respect to one another. These organizations operate primarily over word-sized and clause- or sentence-sized units. The study of structure is traditionally divided into discussions of words (morphology) and sentences (syntax), but in this text we’ll combine our study of them into one chapter: Chapter 3.

Morphology. Some English words are simple: giraffe. Others are complex: disambiguation. The words of some languages are small or short: French la ‘the’, but the words of other languages are very big or long: Swahili nimekwishafika ‘I have finished arriving’. The study of morphology explores what the words of languages look like. In particular, we explore what the meaningful units of language are and how they are combined to create words (like how giraffes is made up of giraffe+s and disambiguation has a dis- at the beginning and a -tion at the end).

Syntax. Syntax is the study of how words are organized into phrases and sentences. In Chapter 3, we also consider how the words are organized and built up into sentences. We’ll see how languages vary in what organizations seem possible to their speakers or signers, and – as in the other chapters – we’ll take that knowledge from the unconscious parts of our brain and make it overt.

There is also a significant relationship between the above two domains; some languages have complex words that also function as sentences, so we’ll explore the overlap in these two domains of exploration. Morphological processes give us words themselves (though each language builds words in different ways), and syntactic processes give us phrases and clauses and their rule-governed interactions within any particular language.

Meaning
The study of meaning in language is often divided into the study of the meanings of words and sentences, and the study of meanings of the speakers of those words and sentences. The division of these areas of meaning isn’t very clear-cut, and we’ll address both together in Chapter 4.
1 Introducing Language Analysis

Semantics. Semantics is the study of the meanings of individual words and phrases. Speakers of the same language have similar links between words and their meanings – when I write the word *Hund* here, a similar picture is called up in the brain of a German speaker in Pennsylvania and the brain of a German speaker reading this text in, say, Berlin. All the above domains of grammar would have little function if there weren’t some way of linking those composed units of language to meaning. This is the part of language that allows it to function as a medium for the exchange of thought.

Pragmatics. Pragmatics is the study of speaker meaning (as it can differ from word meaning) or how people use language. If all we had were decontextualized meanings for words and phrases, then we couldn’t explain how the same thing said in a different time or place, by a different person, or to a different person can actually mean a different thing. When a basketball fan watching a game says, “Look at the time!” to their friend, this means something drastically different from when an introvert says, “Look at the time!” when attending a party. Pragmatics addresses the rule-governed variability of meaning that is created through contextualized language use.

Like the relationships we observed for phonetics and phonology, and for morphology and syntax, there is also an interesting relationship between semantics and pragmatics. Semantics provides the meanings of words and sentences, but pragmatics explains how speakers use those sentences to create communicative content. These domains, or modules, then guide our discussion of Language and give us a better idea about what Language is. Language is a structured system (of unconscious rules) that governs the organization of small to large communicative elements. While all languages contain these domains, each language has different rules across each of these domains. This book addresses how linguists study each of these domains by first exploring sounds in Chapter 2, then structure in Chapter 3, and then meaning in Chapter 4.

It shouldn’t be surprising really to consider that there might be a set of complex rules that govern how linguistic units are stuck together or organized. After all, in what other science do we not see the same principle at play? Consider chemistry. The basic building blocks are atoms which together form molecules. But you can’t just take any old atoms and stick them together. Each molecule is made up of a very specific combination of a very specific set of atoms. Consider water: We know that a water molecule is made up of two atoms of hydrogen and one of oxygen. Those amounts of those specific atoms follow some general principles of atom combination rules, and consequently, that type of molecule can exist. In introductory chemistry classes, a student learns the different elements of matter and what they’re composed of, as well as learning the rules that govern how those elements/atoms are allowed to stick together. With that knowledge, they can begin to construct and deconstruct more complex organizations of matter.
Unconscious Knowledge of Language

It may seem daunting then to consider what the set of rules for any one language are, but as it turns out, unlike the atom binding rules in chemistry, you already know all the rules of the language(s) you grew up speaking or signing. This expert unconscious knowledge of your native language is termed by some Native Speaker Intuition (NSI), but since not all languages are spoken, and because it’s not intuition but rather expert knowledge, it makes more sense to call it Unconscious Knowledge of Language (UKL), so we will refer to your UKL throughout this book.

Unconscious Knowledge of Language

One of the tools that a language researcher (linguist) has in their toolbelt is this Unconscious Knowledge of Language (UKL). This UKL tells us what conforms to the rules of our language system and what does not. In this regard, studying language is made both easy and very difficult. The easy part is that we have at our disposal a wealth of knowledge about at least one language and its internal structure. Multilingual folks are extra lucky in their access to more than one unique set of elements and rules! The hard part is that the wealth of knowledge is trapped in our unconscious. It can be difficult to extract that knowledge, but throughout this text you’ll learn how to do so, and how to access the knowledge in other speakers’ brains simply by looking at language output and analyzing that data.

Previously in this chapter, we discussed six domains of Language. Let’s look at each of the domains listed above and consider what expert knowledge a native speaker of English might have regarding those unconscious rules. For those of you reading whose native language or languages are not English, consider in each section what kind of unconscious knowledge you have of those languages, across each of these domains.

UKL in phonetics. Native speakers of English know how to make the ‘r’ sound at the beginning of the word ring. Speakers of a number of other languages have difficulty with this particular sound. We also know that the Spanish trill (like in the word perro ‘dog’) isn’t part of the English sound inventory. These are things that we know simply because you know if you are a native speaker of English.

DISCOVER 1

Come up with examples of sounds that you have encountered – perhaps in studying another language – that are not part of the sound inventory of your native language or the language you know best.
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UKL in phonology. We know that ‘blick’ is a better English word than ‘bnick’, ‘sphick’, or ‘gick’, even if we don’t quite know why (although upon just a bit of introspection we realize that words never start with ‘bn …’ sequences, and so bnick must somehow disobey some phonological rule). We can count the number of syllables in a word, even if we can’t really define what a syllable is. We know that balance has two syllables, but we might not know whether the ‘l’ is part of the first or second syllable.

DISCOVER 2

We alluded above to an unconscious rule that prohibits ‘bn …’ sequences from starting words in English. Many English words begin with the letters ‘kn …’. How do English speakers pronounce those words? In German the ‘k’ and the ‘n’ are pronounced in sequence (Knie ~ /kni/, written in the International Phonetic Alphabet, which you’ll learn about soon). Are there other combinations of sounds you’ve encountered that are allowed in some other language, but not in your own native language(s)?

UKL in Morphology. We know that ment-govern isn’t a word, but government is, because the latter follows the morphological rules of English: -ment is a suffix, which means it goes after the root govern rather than before. We also know that -ment attaches to verbs like equip, detach, improve but not to nouns like dog or truth, or to adjectives like happy or curious. If you are a native speaker of Spanish, you know what ending the verb root com- (eat) takes depending on who’s doing the eating: Yo como (I eat), but tú comes (you eat). While a learner of Spanish has to memorize the appropriate endings, a native speaker has unconscious knowledge of the appropriate form.

DISCOVER 3

We just looked at how Spanish verbs show who is doing the verb through a different marking on the end, but English doesn’t (it’s eat for both I and you). Either use your own knowledge from learning new languages or do a little research to come up with some other examples of information marked on words that isn’t marked in English. You could direct your attention to nouns; for example, many Indo-European languages use what is called gender marking and many languages classify words according to their shape (long thin object, small round object, etc.).