3.2: Iconicity

Iconicity and Arbitrariness in Spoken Words

If you had to invent a word for monkey, what word form would you choose to make it as memorable as possible to other speakers? What about a word for axe?

We have discussed two aspects of words, their meanings and their forms (and in the rest of this chapter, there will be lots more to learn about forms), but we have not yet considered the third aspect, the connection between form and meaning. How do people settle on which forms to use with which meanings?

Recall that the speaking Lexies begin with a small set of vowel phonemes for their first word forms and that these are used to refer to a set of individuals and categories. One category is tiger. Which vowel would be a good choice for this category? The Lexies more often hear than see the tigers in their vicinity, so they are familiar with the sound the animals make. While they are not capable of a very good imitation of the roaring of the tigers, it is reasonably clear to them which of their vowels are further and which are closer to this sound. So they choose this vowel to refer to this category. The figure below diagrams the relationship. The form of the word is indicated by aaa. In addition to the form-meaning relation joining aaa and tiger, there is a similarity relation joining the word form to the tiger's sound, as well as the relation between a tiger and its sound.
Apples don't make sounds of course, but a sound is produced when we eat them. A vowel by itself is a very poor imitation of this sound, however, and the Lexies have to wait till they have syllables that have vocal tract closures at the beginning and end to produce something passable, for example, this sound.

So far we've seen that the imitation of sounds is a possible motivation for the choice of a form for a word. But it's not the only possible motivation. We'll see others later on in this section and other sections. For now, the important point is to distinguish two different kinds of form-meaning connections, those that are motivated, for example, based on a resemblance between the sound of the word and a sound associated with the meaning, and those that are not motivated, where the association between a form and its meaning is apparently random. The first type of connection is referred to as iconic, the second as arbitrary. For most categories in the world, there will be no obvious motivation for the spoken word form. For example, what sound would suggest the category house or the category sand? In such cases spoken languages have no alternative but to arbitrarily associate forms with meanings. The forms of the English words house and sand don't suggest their meanings at all, and this is probably true for most, if not all, other spoken languages.

Consider what the advantages of iconicity might be. Someone learning a new word has to learn three things: the meaning, the form, and the association between the meaning and the form. We have discussed the learning of word meaning, and, in the next chapter, we'll discuss the learning of form. It seems clear from what is known about long-term memory that the more the learner has to go on, the easier it is to remember an association. Say a Speaker (and learner) of our Lexies' language is thinking of the category tiger and trying to remember how to refer to it. If the word-meaning association is arbitrary, the Speaker has nothing more than the concept itself to go on. But if (as shown in the figure above), there is an additional similarity relation connecting the meaning (or an associate of the meaning, the tiger's sound) and the form, the Speaker has an extra path to get to the word form. In fact it is not known if iconicity actually helps Speakers (and learners) in this way; ongoing research should give us some clues.

In modern spoken languages, iconicity is not very common among the nouns used for things. In English, we have a number of words imitating the sounds of animals, for example, bow-wow, roar, cluck, and chirp, and for various natural and artificial events, for example, splash, rumble, and bang, but we don't usually use these words as nouns to refer to the things that make the sounds. In Japanese it is common in speech directed at children to use animal sounds to refer to the animals that make the sounds. For example, wan-wan may mean 'dog', and moo-moo may mean 'cow'.

Why Dogs Sound Different in Japanese and English

These examples of animal sounds bring up the obvious differences between languages in their imitations of what are the same sounds in nature, the sounds that dogs or cows make, for example. These differences result in part from the different phonemes used in the languages; thus a word form like crash is not possible in Japanese, as we will see later.
because Japanese syllables cannot begin with sequences like \( kr \) or end with a consonant like \( sh \). Another reason for these differences is that the imitations are only very imperfect (people are not very good at imitating sounds from nature), and a great deal of variation is possible in how they're achieved. Thus the vowel Japanese speakers use in their word for the sound of a cow is different from the vowel English speakers use in their word. When a form is iconic, the implication is not that a person with no knowledge of the language could predict the form given the meaning; the form is still a convention. The point is only that the form bears some non-arbitrary relation to the meaning.

There is another potential difference between languages with respect to iconicity. It seems that some languages are more iconic than others. Japanese, Amharic, and Lingala, for example, all have entire categories of words, called expressives numbering in the hundreds or thousands that seem to have some sort of iconicity as a defining feature. The iconicity is often not based on the imitation of a sound from nature but may relate more to how the position or the movement of the organs of speech directly corresponds to something in nature. For example, the Japanese word \( pyon-pyon \), roughly 'jumping movement', seems to suggest its meaning through the "jumping" of the lips. Investigation of these aspects of spoken languages is still very inconclusive and controversial, however.

### Iconicity in Signs

Exercise 1

If you had to invent a sign for monkey, what form would you choose to make it as memorable as possible to other signers? What about a sign for axe?

The fact that the most form-to-meaning relations for words in spoken languages are arbitrary rather than iconic has led many linguists to believe that iconicity is only a marginal phenomenon. An examination of sign languages may lead us to a different conclusion.

Let's return to the Lexie tribe that decided to go with visual/spatial word forms rather than spoken word forms. For tiger there is now no possibility of imitating the sound of the animal. But a tiger has more visual properties than acoustic properties. They could choose to represent the stripes, the gait, the tail, or the whiskers of the tiger. And for categories that have no obvious sound associated with them such as tree, lake, and sand, the signing Lexies can resort to representing the shape of the thing, the way it is used by people, or the way it responds when it is manipulated in some way. The fact that signs are executed in space means simply that sign language offers more possibilities for iconicity than spoken language does.

### Sign languages are More Iconic than Spoken Languages.

It is not surprising then that in modern sign languages, the lexicons are full of iconicity. Here are some examples from American Sign Language.

In the case of the sign for tiger, the movements of the hands convey something of the appearance of the members of the category, namely the tiger's stripes. The sign for apple is more abstract; the signer's cheek represents the fruit, and the moved finger represents the stem of the fruit being twisted off, as when one is going to eat the fruit. The sign for key represents the action of using the key to lock or unlock something.
The ways in which these signs are iconic should remind you of what you learned about metaphor in the last chapter. The source domain in this case is the real world in which things have shapes, move about, and get used by people. The target domain is the signing space in which signers move their hands and arms. Metaphor, and iconicity, is possible because there are mappings between the two domains. Note that signs are also metonymic; the sign for tiger represents a part of the animal rather than the whole animal. One linguist who focuses on iconity and metaphor in sign languages is Sarah Taub.

In sum, iconicity makes sense since it facilitates memory for the association between form and meaning, so it should not surprise us that language will sometimes capitalize on iconicity when this is possible. There are many more possibilities when the medium is visual/spatial than vocal/auditory, and the great majority of spoken word forms are probably not iconic. We will see more examples of iconicity in both spoken and signed language later in the book, both for words and grammar.