

5SSEL026 – Language Construction
Lecture 10
Language and Culture

All languages exist within a culture, even artificial languages. For instance, the culture of the BASIC computer language is computers, popular programming, the late 20th century, and a particular type of human personality.

All human languages are expressions of human communication, and they are therefore constrained by the brains that produce them. However, the range of social systems that humans can devise is quite large, and the range of languages to support those social systems is even larger. Over the past 50,000 years, about 107 billion humans have lived on Earth (according to the US Population Reference Bureau); so, with an average lifespan of 50 years, that makes 5.35 trillion person-years. Ignoring the 3 billion speakers of the top ten languages, the average number of people speaking any one language today is about 500,000 (for the first 49,000 of the 50,000 years the average would have been considerably smaller, but we'll ignore that). If a language lasts 500 years then it uses about 250 million person-years, so at least 20,000 human languages have existed in the last 50,000 years – and, if modern languages are a guide, no two are likely to use exactly the same rule system. That's a lot of variation.

WHAT IS CULTURE?

A simple definition of culture is that it is the cement that holds a group, particularly a group of humans, together. A more complex definition is that it is the set of productive solutions that the group has adopted to encourage or enforce individual co-operation, and the set of counter-productive solutions that the group proscribes. It can be based on logic and reason, or on the superstition that solutions which have worked once will always work. Most cultures are a mix of both these approaches.

The solutions of human culture are often divided into eight areas:

- **Social Organisation:** the social rules we accept and expect others to accept.
- **Aesthetics:** the accepted definitions of what is pleasing and what is disgusting.
- **Values and Attitudes:** The things we consider important, and how we expect others to behave toward them.
- **Law and Politics:** the systems of sanction and governance we live by and expect others to live by.
- **Education:** the intergenerational knowledge systems by which we perpetuate our culture.
- **Religion and Tradition:** the absolute authority we can turn to when interpersonal arbitration fails.
- **Technology and Material Culture:** the limits that the actual world places upon all the other areas of culture.
- **Language:** the communication system which allows us to negotiate toward meaning in all the other areas of culture.

Culture is the group expectations about the individual's behaviour which have, by extension been applied by the self to the self. It contrasts with morality, which is my expectations about my behaviour which have, by extension, been applied to others. Culture and morality usually work together to create an environment where altruistic co-operation is the rule rather than the exception.

However, compared to the other seven solutions of human culture, language seems to have a more fundamental role: the other solutions cannot work without it.

IDENTIFYING A CULTURE

A culture is defined by the answers to a series of questions:

- **Who is a member of the culture, and who is not?** This is often – but not always – a matter of where a person lives, where they were born, and other arbitrary markers of belonging, like accent.
- **Where is the culture situated geographically, and what particular features affect it?** For instance, tonal languages seem to occur in humid areas (Everett et al, 2015)¹; and linguistic diversity seems to decrease as distance from the equator increases (Nichols, 1992)².
- **When does the culture exist, past, present or future?** This affects the technology the language must accommodate.
- **Why does the culture exist?** What do people inside the culture give as reasons for its existence, and what do others say about it?
- **What does the culture consider to be sacred, taboo, disgusting, attractive, etc.?**
- **How does the culture sustain itself – food, happiness, cohesion, reproduction?**

HOW DOES CULTURE AFFECT LANGUAGE?

Different models of the relationship between language and culture produce different ideas of how language works. However, when we discuss language we are discussing humans; and when we discuss humans we are discussing culture. Language and culture are inextricably intertwined around humanity, to the point where differentiating them is spurious. As we move through time, so they move through time; as we change, so they change.

- Both the strong argument of linguistic determinism (Benjamin Whorf³) and the null argument of linguistic neutrality (Noam Chomsky⁴) are largely dead. The middle road of linguistic relativism (Edward Sapir⁵, Lera Boroditsky⁶, Guy Deutscher⁷, Daniel Everett⁸) is now the commonly-held view – at least, among cognitive linguists.
- Despite the unlikelihood of linguistic determinacy, some language creators seem to believe that their inventions can direct ways of thinking (e.g. Lojban and Ithkuil; see also Pravic in Ursula K. Le Guin's novel, *The Dispossessed*). This is probably optimistic.

Some examples of linguistic culture (language affecting culture affecting language) are:

- The Pirahã appear to have no recursive structures in their language (Everett, 2005). It also seems to affect their numerical capacity, leaving them unable to access the number-line concept needed for infinite counting. The lack of recursion is contrary to the Hauser-Chomsky-Fitch (2002)⁹ position, that recursion is the defining difference between human language and nonhuman communication. If this were so then it could mean that we cannot call Pirahã a human language.
- Mandarin speakers use a timeline which runs from the ground (the past) upward into the future (Boroditsky et al, 2011)¹⁰. They were quicker to answer 'before' and 'after' questions correctly if they had just seen a vertical array of objects rather than a horizontal array; English speakers were the opposite.
- The green light on Japanese traffic lights is bluer than in the West, because lighter greens are labelled as yellow in Japanese (Deutscher, 2010). The aquamarine light is used to prevent confusion with the amber light.
- The Aymara tribe in South America see the future as behind them and the past in front of them (Núñez & Sweetser, 2006)¹¹. This is because their fundamental time metaphor is based not on progression but on vision – you can see the past but you cannot see the future.
- The Amondawa of South America do not see time in terms of space (Sinha et al, 2011)¹². They also lack concepts of

calendrical time, and they seem to order things in terms of importance rather than temporal seriality.

- Thibodeau & Boroditsky (2013)¹³ showed that priming subjects with a metaphor (e.g. crime is a virus, crime is a beast) affects the solutions they choose to manage a problem. We seem to delimit our current thinking based on our previous thinking; and, if a particular metaphor becomes a fundamental metaphor in a culture, it can affect the way topics related to that metaphor are viewed by that culture. Some of the topics subject to culture-defining metaphors are listed below.

DEFINING YOUR CULTURE: NORMS

Norms are the basic values and beliefs of a culture, the baseline from which all aberration is judged. The way norms affect your language include:

- **Are these the Good Guys or the Bad Guys?** Remember that from inside the culture, the members of the culture are always the good guys; but your report is written from outside the culture of your language (and from inside your own culture). It is permissible to take a stance on the culture of your language.
- **The environmental context:** does the physical environment in which the culture exists create fundamental metaphors for your language? For instance, a desert culture (such as Arrakis in Frank Herbert's *Dune*) will treat the word for water with much greater respect than English does; **watered down** will not have the same metaphoric implications.
- **The basic family unit:** the nuclear family of modern societies need not be a given. If it isn't, what social system is in place to raise children; and what is the role of older people?
- **Gender roles and relationships:** How are genders determined in the culture? Even if there are two sexes, gender need not be similarly limited. Are there limits on an individual based on their gender?
- **A stratified society?** Are there privileged and underprivileged members of the society? What determines the differentiation? Is there a caste system? Do different groups have their own codes or dialects, or even languages?

DEFINING YOUR CULTURE: TECHNOLOGY

Technology dictates the complexity of your culture, the things the people are capable of achieving. The level of technology also dictates which terminology is needed in your language, and can even affect the complexity of form and meaning your language can handle. Technology effects include:

- **Level of technology:** how would you describe your culture? Is it hunter-gatherer, pastoral, agrarian, pre-industrial, industrial, post-industrial, or something else? Is there something other than technology which is paramount in your culture (e.g. art, philosophy, interpersonal systems?)
- **Work & careers:** what jobs are available? Who are they available to? What are the prestigious jobs?
- **Education & training:** how are young people introduced to the culture? Is it a formal system with rites of passage (e.g. exams, or Batmitzvah, or a First Australian walkabout)? Or is it more arbitrary? What is taught, and what are the rewards for being "educated" or "qualified"?
- **Value and worth:** does the culture monetise everything? (Clue: if there is word for *priceless*, the culture is highly monetising.) How are people rewarded for their work? Is wealth intrinsic (my money, your money) or extrinsic (our wealth, wealth)?

¹ Caleb Everett, Damián E. Blasi & Seán G. Roberts (2015). Climate, vocal folds, and tonal languages: Connecting the physiological and geographic dots. In *PNAS* 112:5, 1322-1327.

DEFINING YOUR CULTURE: MORALITY

Morality is my expectations about my behaviour which have, by extension, been applied to others. It is the counterpoint to culture, which is the group expectations about the individual's behaviour which have, by extension, been applied by the self to the self. Culture is impossible without morality: it becomes an unenforceable ideal because nobody is willing to police it. With morality, culture has access to altruistic punishment through group sanction – morality polices culture. Some ways in which this happens are:

- **Sacred, mundane and profane:** which activities are special and only performed at certain times or in certain places or by certain people? Which activities are available to all and have no significance beyond their practical effect? Which activities are proscribed or forbidden?
- **Pointless traditions?** If a culture performs certain rituals because they have "always happened", even though the ostensive reason for the ritual is no longer known, then it has pointless traditions (e.g. Easter eggs). However, the very act of performing the ritual is likely to keep the culture internally cohesive and externally exceptional.
- **Markers of belonging/group membership:** almost all groups have markers of belonging. Among these markers are badges, flags, tattoos, piercings, songs, clothing – and, of course, language.
- **Treatment of strangers:** the way a culture treats strangers says a lot about that culture. From the default xenophilia of the 4th US President James Madison, to the default xenophobia of the 45th US President Donald Trump, humans seem capable of both great generosity and great chauvinism.

DEFINING YOUR CULTURE: WHAT NOT TO INCLUDE

It is possible to over-define your culture as well as your language. Remember that you need to create just enough credibility in your culture to ensure the credibility of your translation; and you need just enough language to do that translation. If, for instance, you need a past tense to produce your translation then by all means define other available tenses; but don't get bogged down in detail.

Some of these over-definitions are:

- **Too much history:** you are writing a report about the language, not the culture.
- **Too much comparison with other languages:** you are writing a report about your language, not languages in general.
- **Too much theory:** you are writing a report about *a* language, not language as a concept.
- **Too many references:** only you are an expert on your language, so use other authors to illustrate, but not to define, your language. If your language is based on an existing fictional text, remember that your language is constrained by the text, it is not dictated by the text. The author is just another observer, and sometimes they get it wrong, too.
- **Too much language:** remember that the task is to produce enough language to translate a short passage. You do not need a comprehensive grammar or dictionary to do that.
- **A novel script:** your language should be expressible in a standard Roman alphabetic script (or phonetic script), with supplementary symbols if needed.

All of these language features are fine in moderation. You will need some of each of them (except a novel script), but don't let any one of them take over your report.

² Johanna Nichols (1992). *Linguistic Diversity in Space and Time*. University of Chicago Press: Chicago, USA.

³ Benjamin Lee Whorf (1956). *Language, Thought and Reality*. MIT Press: Cambridge, Mass, USA.

⁴ Noam Chomsky (2000). New Horizons in the Study of Language. In *New Horizons in the Study of Language and Mind*. Cambridge University Press: Cambridge, UK, ch1.

⁵ Edward Sapir (1921). *Language: an introduction to the study of speech*. Harcourt Brace & co: Orlando, USA.

⁶ Lera Boroditsky (2003). Linguistic relativity. In L. Nadel (ed.), *Encyclopedia of Cognitive Science*. Nature Publishing Group: London, UK.

⁷ Guy Deutscher (2010). *Through the Language Glass: Why the world looks different in other languages*. Arrow Books: London, UK.

⁸ Daniel L. Everett (2005). Cultural Constraints on Grammar and Cognition in Pirahã: Another Look at the Design Features of Human Language. In *Current Anthropology* 46:4, 621-646.

⁹ Marc D. Hauser, Noam Chomsky & W. Tecumseh Fitch (2002). The Faculty of Language: What Is It, Who Has It, and How Did It Evolve? In *Science* 298, 1569-1579.

¹⁰ Lera Boroditsky, Orly Fuhrman & Kelly McCormick (2011). Do English and Mandarin speakers think about time differently? In *Cognition* 118:1, 123-129.

¹¹ Rafael E. Núñez & Eve Sweetser (2006). With the Future Behind Them: Convergent Evidence from Aymara Language and Gesture in the Crosslinguistic Comparison of Spatial Construals of Time. In *Cognitive Science* 30, 1-49.

¹² Chris Sinha, Vera Da Silva Sinha, Jörg Zinken & Wany Sampaio (2011). When time is not space: The social and linguistic construction of time intervals and temporal event relations in an Amazonian culture. In *Language and Cognition* 3:1, 137-169.

¹³ Paul H. Thibodeau & Lera Boroditsky (2013). Natural Language Metaphors Covertly Influence Reasoning. In *PLoS ONE* 8:1, e52961.