



# Human sociality at the heart of language

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Within interdisciplinary research on language and mind over recent decades we've seen certain key differences in approach emerging: while some argue for the importance of general cognition in making language possible (categorization, attention, inference, etc.), others argue for innate language-specific capacities.

But both of these stances focus on the relationship between language and the individual mind. Other developments in research on the special properties of social interaction suggest the need to focus on understanding the nature of language as a fundamentally social-interactive resource. This lecture discusses ways in which language is not only a tool for social action and for the maintenance of social relations, but is also fundamentally designed for, and by, these functions. Examples are drawn from systems of reference (to persons), systems for managing conversation (turn-taking), and the role of micro-level social interaction in macro-scale linguistic processes.

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HUMAN SOCIALITY AT THE HEART OF LANGUAGE



## **Human sociality at the heart of language**

*Rede uitgesproken bij de aanvaarding van het ambt van hoogleraar Etnolinguïstiek, in het bijzonder die van Zuid-Oost Azië, aan de Faculteit der Letteren van de Radboud Universiteit Nijmegen op woensdag 4 november 2009*

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Vormgeving en opmaak: Nies en Partners bno, Nijmegen  
Drukwerk: Drukkerij Roos en Roos, Arnhem

ISBN 978-90-9025238-4

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*Meneer de rector magnificus, zeer geachte toehoorders,*

Het is een eer om benoemd te worden tot hoogleraar op de Radboud Universiteit Nijmegen. Van een langdurig proces was de allerlaatste stap ook de allerleukste: het 'kennismakingsgesprek' bij de voorzitter van de college van bestuur de heer De Wijkerslooth en de rector magnificus de heer Kortmann. Op die dag ging ik naar de kamer van De Wijkerslooth, stropdas aan, om de hoge heren te leren kennen. En die waren ontzettend vriendelijk. Ik: 'Goedemorgen, Hoe maakt u het?' De Wijkerslooth: 'Alles goed met jou?' 'Prima, dank u wel'. Toen kwam de heer Kortmann binnen: 'Wil je misschien een kopje koffie?' 'Graag, dank u.' Na een paar minuten kon de heer De Wijkerslooth er niet meer tegen: 'Je kunt gewoon "jij" zeggen hoor'. Ik verstond 'm niet goed: 'Wat zegt u?'. 'Zeg maar "jij"!'. Ik mocht hem gewoon gelijk gaan tutoyeren. Toen ging het wat soepeler: we hadden het over waar ik vandaan kom, hoe het me bevalt in Nederland, enzovoort. En toen kwam dé vraag, de enige die eigenlijk echt telde. De Wijkerslooth vroeg zich af: 'Wat is dat nou eigenlijk, jouw leeropdracht, de "etnolinguïstiek"?'. Ik had meteen een mooi voorbeeld paraat: 'Dat "u/jij"-gedoe, zonet, dat is precies het soort ding dat wij in de etnolinguïstiek bestuderen. Afhankelijk van welke taal je spreekt, kun je, of moet je soms, bepaalde dingen uitdrukken. In het Nederlands bijvoorbeeld moet je een keus tussen u en jij maken, en die keus draait om sociale factoren zoals solidariteit en macht. Jij mocht mij net als eerste tutoyeren, maar niet andersom. Toch? Het gebruik van dit soort systemen hangt ook samen met verschillen in cultuur, zoals verschillen tussen oude en jonge generaties in Nederland, of tussen sprekers van verschillende talen in verschillende culturele omgevingen. Kijk maar naar het gebruik van tu/vous in het Frans.' Zo ging het ongeveer. Wat mij betreft liep het gesprek goed af. Het allerbelangrijkste: ik was geslaagd. 'Het wordt pas maandag officieel,' legde de heer Kortmann uit. 'Hier wordt in een vergadering over gestemd, maar het is een commissie van maar drie personen, en wij twee stemmen allebei "ja", dus – je bent door. Proficiat.'

*Zo eindigt dit verhaaltje, en zo begint het verhaal van deze inaugurele rede.*

In 1968, linguist Noam Chomsky defined a goal for linguistics with this question: 'What contribution can the study of language make to our understanding of human nature?' (Chomsky 1968:1) A subsequent tradition of language research has proposed insights about that part of human nature we call the mind. The scope of these insights was narrow. Much of the research on language and mind has focused on the individual in isolation, with little regard for performance or competence in a social environment. This is a problem because the human mind is an essentially social mind (Mead 1934; Vygotsky



1962/1934; Dunbar 2003; Frith and Frith 2007). *Homo sapiens* is famously defined as the ‘rational animal’, but what really makes us unique is our sociality.

The term *human sociality* denotes more than a single faculty or skill. It captures a constellation of our socially-oriented cognitive capacities. These capacities include our awareness or imagined awareness of people’s mental states, what people can see and hear, what people know and don’t know, and what knowledge people share. They include the capacity to attribute intentions and goals to others (as well as an incorrigible tendency to make such attributions to non-human entities as well), and our capacity to anticipate and monitor others’ attributions of those goals to ourselves. They include our micro-political motives and the cognition we devote to monitoring human relationships in large and complex social groups.

These issues were explored by contributors from a range of disciplines in the book *Roots of Human Sociality* (Enfield and Levinson 2006b). Their contributions convinced me that a proper investigation of human nature must take seriously the core concerns of multiple, often disparate research traditions. For example, it’s essential to address mind and brain, although not everyone thinks so. One participant at the *Roots of Human Sociality* conference in North Carolina in 2004 suggested that cultural activities – such as talking on the telephone – could be analyzed and understood without reference to psychology or neurocognition.<sup>1</sup> György Gergely memorably retorted: ‘Try doing it without a brain’. True, and there’s a counter-retort: Try doing it without a culture. Our normal skills, as observed in both ethnography and experiments, are utterly dependent on a social and cultural environment, particularly for their development. It is as absurd to imagine that a man could talk on the phone without a mind or brain as it is to imagine that he could do so without having been socialized in a rich cultural environment.

For researchers who focus on the isolated individual, a socio-cultural environment can be daunting because of its diffuse and enormous ontology. Society and culture are constructed above and beyond the lifetime and mind of any individual, and so to participate in cultural activities – from giving ritual alms to monks to taking the bus to work – we can’t act alone. None of us invented these activities. We’ve inherited them from a long historical line of cultural transmission and development. Social conventions are not only distributed over time in this way, they also need to be cognitively distributed in social space, if joint activity is to be realized at all. This is true for a wide range of activities from organizing a wedding to running a space station. Each is a product of the human mind. Each operates by the human hand. But neither springs from a single mind or runs by a single hand.

Part of the puzzle of human nature is to figure out what connects us as individuals with the cumulative cultures of which we are an integral part. In *Roots*, we proposed a model for human nature in which these two critical parts of the equation – individual cognition at one end and collective culture at the other – are connected by social

interaction (Enfield and Levinson 2006a). Social interaction is what links minds with minds, and minds with culture more generally. Language can be studied at each of these three levels, and it must be. At the level of mind, language can be found in the psychological representations we carry around with us, the structures that control the processes of speech production and comprehension, and that must be neurally instantiated. At the level of culture, language is a public system above and beyond any single individual's embodiment of it. It has accumulated through long historical processes of transmission lasting generations, and it is learned in specific forms that are given by the social environment one inherits as an accident of birth. And, at the level of social interaction, language can be found in the moment-by-moment practice of social relationships, in which we observe language in the wild, where we learn it both as children and as adults, and where the psychological processes of language production and comprehension come together and are exercised. No single level is a privileged locus for language. Yet most traditions of research in linguistics focus on just one of them.

How, then, are we to use language to study human nature? We start by recognizing that language is a natural phenomenon and treating it as such. 'The fact that man is the animal which has relatively recently succeeded in dominating all the others does not mean that he is therefore exempt both from being an animal and from being studied as such.' (Tiger and Fox 1966:80) Language, then, is a kind of animal social behaviour. This makes it a subject for human ethology, though surprisingly it has been little studied in that field. More attention has been paid to non-verbal communication, where direct comparison across species is more feasible (Hinde 1972). Like other biologists, ethologists recognize the priority of fieldwork. 'Science begins with the description and categorization of the events it studies.' (Eibl-Eibesfeldt 1970) This is how linguistics needs to work and it is why we go to great lengths to study language in the wild.

Among the many things we see when we look at language in the wild is that language is not merely a means for passing on information – it is our primary tool for social action. Our many and varied social goals can be classified under macro-motives including manipulating others by getting them to do things, helping and informing others, based on prosocial motives, and sharing experience with others to build social affiliations. The importance of these macro speech acts has been well known for decades and reported on in research on language and interaction in anthropology and sociology (Jakobson 1960; Austin 1962; Hymes 1964; Goffman 1981; Dunbar 1996, *inter alia*). These ideas have also been promoted in recent work in psychology (Tomasello 2008).

So this is the stance I'm taking here: human sociality is at the heart of language. We now explore this in three domains. First, reference, using a language-specific grammar and lexicon. Second, structures of interaction such as turn-taking, which are seldom taught in linguistics. And third, system transmission, the ways in which languages and other cultural systems are transmitted at a level above and beyond the individual.

## REFERENCE

If a speaker wants to refer to a person or thing using language, what is the nature of the task? There are two simple principles. Don't under-tell. Don't over-tell. (Cf. Schegloff 2007a; Enfield 2007.) If we give too little information our conversation partner won't know what we're talking about. And we should avoid giving too much information, at the very least to avoid unnecessary effort, but also to avoid insulting the other's intelligence. From these two principles certain patterns emerge. Take a typical case from a US English telephone call (Sacks and Schegloff 2007/1979). Speaker A's first reference to a person – a schoolteacher A and B once had – is made in very specific terms, using the person's name (*Kuhleznik*). Immediately after this, the next reference to the same person, this time by Speaker B, is done in semantically very general terms, by means of a simple pronoun (*her*).

A: Did they get rid of **Kuhleznik** yet?

B: No, in fact I know somebody who has **her** now.

If our only concern in referring to people was to make it clear to whom or what we are referring, while minimizing the effort required to do so, then this is the only pattern we'd see. But managing information in this sense is not our only concern. Our choice of referential strategy is also guided by considerations related to social affiliation, a concern that is no less important.

Speakers sometimes refer to people in unexpected ways. Here's an Italian case from a video-recorded conversation between a young man Enzo and his mother (Stivers 2007), in which Enzo refers to his younger brother Roberto (the mother's other son). There are several strategies Enzo could choose when referring to Roberto here. A default form would be to refer to him by name. Other strategies include kin-based associative formats such as 'my brother', or the form he actually selects in this case: 'your other son'.

*Tu devi dire all' **altro tuo figlio** di decidersi.*

'You must tell **your other son** to make up his mind.'

By referring to Roberto with this non-typical formulation, Enzo is clearly doing something out of the ordinary. He did not choose this particular way of referring to Roberto simply to convey that it's Roberto whom the mother should tell. For that, he could simply have said *Roberto*. By saying 'your other son', Enzo positions himself in a particular way with respect to Roberto. We know from the context that Roberto is creating problems for Enzo and his mother through indecision on a matter of concern to all three. By referring to him as 'your other son', Enzo exploits two properties of this atypical formulation, the first by what it's not, the second by what it is. (See Stivers 2007.) So:

first, by being atypical, the formulation ‘your other son’ stands out as not the normal way to talk, and thereby signals that some special message is intended. Second, through what it actually does say, ‘your other son’, signals **what** it is that this special message aims to achieve. Here Enzo is distancing himself from Roberto and from any blame for causing the problems. This is done partly through the use of ‘your’, associating the referent with ‘you’, and partly by the use of ‘other’. Both serve to express distance between the referent and the speaker, a function that is well suited to this context.

Phenomena of this kind were well described by the philosopher Grice (1989) and later refined by others (e.g. Levinson 1983, 2000). When we say something in a non-typical way and therefore in a way that attracts attention by being noticeable for its non-typicality, it will be understood to have a special added message. This pragmatic effect can be socially strategic, as in the Italian example, but it can also arise unintended. In an example from a UK telephone call (Land and Kitzinger 2005), Janice is talking to an insurance salesman. She says she wants insurance for ‘self and spouse’. Presumably from a statistical bias, the salesman takes the word *spouse* when spoken by a woman to refer to a man. Soon after, he says ‘you said you’d like to insure your husband to drive the car’. This analysis turns out to be wrong, and Janice corrects him, saying ‘It’s not my husband, it’s my wife’, then getting straight back to the business of the call.

In Janice’s utterance ‘It’s not my husband, it’s my wife’, there is a mismatch between social categories encoded in English: ‘woman’ on the one hand, and ‘person who has a wife’, on the other. It has been shown that such mismatches have consequences for what happens in the brain. In one study, subjects’ brain activity was measured while they listened to sentences like ‘Every night before going to bed I enjoy a nice beer’ (Berkum et al. 2008). In a congruent condition, the speaker is an adult, while in another condition the speaker is a young child. The mismatch between the social category of the speaker (child) and the content of expression (enjoying a nice beer) has an observable effect on brain activity. There is an increased negativity in electrophysiological activity in the brain on hearing the key word *beer* spoken by a child (compared to when hearing an adult say it). With this kind of data, we see that apparent speaker-message mismatches – like a child saying ‘I enjoy a nice beer’ or Janice saying ‘It’s my wife’ – have consequences in the brain.

With data from social interaction we can also see the consequences of these mismatches for everyday life. Returning to our example, a little while after Janice has said ‘It’s not my husband, it’s my wife’, the salesman takes the opportunity to apologise for having assumed that by ‘spouse’ she meant ‘husband’. But while his intention is to right a wrong, he may be making things worse by turning Janice’s sexuality into the topic of conversation. While it is safe to assume that this was not an aim of Janice’s original form of reference (‘spouse’), the unexpected nature of her second reference (‘my wife’) did in fact have this result.

These examples show how different ways of referring to people not only serve an informational imperative (to successfully achieve reference to a person, place or thing) but also serve social goals. Some linguistic systems elaborate this social side of reference in the structure of the grammar. Many European languages give speakers an apparently simple choice between two words for ‘you’ (Brown and Gilman 1960). In Dutch, for example, the choice is between the familiar/informal *jij* and the polite/formal *u*. These two words for ‘you’ differ in perceived level of politeness, distance, or formality, along lines well described for many European languages. Their norms of usage are never entirely straightforward, even for native speakers. To use them incorrectly, or to be unsure which is proper for an occasion, can be mildly traumatic.

In Lao – a language of mainland Southeast Asia – the problem of selecting pronouns is of another order altogether. There are not two words for ‘you’, but four, on four distinct levels, roughly characterized as formal, polite, familiar, and bare. But not only are there four words for ‘you’, there are also four words for ‘I’ on the same four levels, and four words for ‘he’ and ‘she’ (in fact there are effectively even more, using other strategies; Enfield 2007:78). Navigating these social categories through the choice of pronoun – a recurring problem that speakers need to solve – can be tricky to say the least.

	‘I’	‘YOU’	‘SHE/HE’
BARE	<i>kuu3</i>	<i>mùng2</i>	<i>man2</i>
FAMILIAR	<i>haw2</i>	<i>too3</i>	<i>law2</i>
POLITE	<i>khòj5</i>	<i>caw4</i>	<i>phen1</i>
FORMAL	<i>khaa5-phacaw4</i>	<i>thaan1</i>	<i>thaan1</i>

#### Lao personal pronouns (singular forms)

We should not expect to find a system like the Lao one in just any language. Such a system can only emerge among people who are particularly concerned about differentiation in the world of social relations. So it is with speakers of Lao. We know from the ethnographic record that Lao speakers have a variegated and uneven social world. It is as if each person is on a giant slow-moving escalator, where everyone else is either above or below you, and your relative position gets higher as you get older. Only a few others fit on the same step as you, for example those born in the same year, who you’ve known since early childhood. The positions of other people have to be monitored carefully in daily life.

This tilted social system is ultimately rooted in the inherent asymmetry of sibling order. Even among twins it matters who was born first. The fact that one of two sisters is older and the other is younger has a range of consequences. It accounts for differences in their rights and responsibilities in life, including differences in how they talk

to, and about, each other. If you had a conversation in Lao with two sisters, it wouldn't matter whether they were young children, or in their 20s, or in their 80s. You could immediately tell from the way they talk to each other which is the younger and which is the older of the two, in a way that a language like English doesn't reveal. From the vagueness of the word *brother* to the egalitarian mode of talking that we adopt in English, you could share several martinis with me and my brother Matt without knowing which is the older, at least not from the words we use. Only more subtle cues would tell you who is more mature.

The above-below organization of Lao-speaking society is not just reflected in overt linguistic practices and in other conscious types of behaviour. There are more subtle cues as well. In research on hand gestures that accompany speech, Lao speakers produce pointing gestures that sketch kinds of diagrams in mid-air (Enfield 2009, chapter 6). With some consistency, speakers will point upwards when referring to people who are socially higher and they will point downwards when referring to people who are socially lower, often when there is nothing in the spoken signal that reveals these 'above' and 'below' relations. The unreflective nature of these spontaneous pointing gestures reveals the depth of Lao speakers' concern with hierarchy in the social world.

We can thus imagine that when it comes to simply referring to someone in conversation, this deep concern with relative difference in social standing should come into play. Suppose we know a woman named *Mon2*. If I want to tell you that I saw *Mon2* at the market, in English I will typically simply use her first name, as in *I saw Mon2 at the market today*. But standard practice in Lao requires me to choose from a range of title prefixes, selected according to the position of that person above or below the social line with respect to myself as a speaker. Perhaps *Mon2* is in the grandparent category, in which case I'll refer to her as *tuu4-mon2* (*tuu4* meaning 'grandparent'). Or if *Mon2* is a younger sister to my father (or equivalent), I'll refer to her as *qaa3-mon2* (*qaa3* meaning 'father's younger sister'). Or she's below me – a niece or daughter or equivalent – then I'll refer to her as *qii1-mon2*, using the 'lower female' title prefix *qii1-*. When Lao speakers make a simple reference to a person, something they must do all the time, they draw accurately and explicitly on an obligatory concern for relative social position. By comparison, in English John may be referred to as *John*, regardless of his social category or relationship to the speaker. But it is not the case that the Lao system reveals an ideology of social relations while the English system does not. English reflects different cultural concerns, namely an Anglo value of egalitarianism, the ideal that everyone in a social group is at the same level. This is symbolized through a system in which a man will be referred to in one and the same way, regardless of age, rank, or serial number.

There are both simpler and more complex systems for referring to people, as the above examples reveal. Each of these cases shows that when speakers need to make reference – a basic function of language – they are required to pay careful attention not just to managing information, but to social affiliation as well.

#### INTERACTIONAL STRUCTURE

Observation of language in human interaction reveals structures that we are not taught in linguistics, though – if we're lucky – we might encounter them within a marginal cluster of disciplines that include conversation analysis, ethnomethodology, and research on talk-in-interaction. A good example is the system of turn-taking in conversation. Research on English telephone conversations in the 1960s and 1970s led to the development of a theory of turn-taking designed to account for the following observed tendencies in conversation: when someone is speaking, it should be just one person, and when someone else is to speak, the 'floor' will be transferred to this new speaker, and this transfer of the floor is done with no gap and no overlap between speakers (Sacks, Schegloff, and Jefferson 1974; cf. Duncan 1974). The claim is not that gaps and overlaps never occur. It is that speakers of English treat no-gap-no-overlap as a normative target. Departures and failures will happen. However, the prediction is that they will be recognized as departures and failures, and treated as such.

Is this model of turn-taking in English found in all languages? Many have suggested that the answer is no. It is reported that in Nordic countries you might ask a question in the morning and not receive a reply until the afternoon. Or at the other end of the spectrum in New York City, a man might be unable to get a word in edgeways due to local norms of fast turn-taking and a preference for simultaneous speech. Is no-gap-no-overlap in turn-taking a culture-specific norm? To test this question, colleagues and I carried out a systematic comparison of conversations, using video-recordings of everyday interaction in ten languages from five continents (Stivers et al. 2009). In order to make a clear comparison, we focused on questions and responses. We measured how long it takes before people respond to a question. Our findings did not support the hypotheses suggested by ethnographic reports. Instead, we found a robust commonality in timing of response across the ten languages, where the average time of transition from the end of one speaker's turn to the beginning of the other's falls within a small time window (a half second). There were differences between the within-language means, but these involved variance of no more than a quarter second either side of a mean for the languages as a set.

Why should there be this commonality between languages? What prevents radical differences across cultures, resulting in the average turn transition time in one language being a long gap, while in another language there is constant overlap? One reason is the natural semiotics of contiguity, i.e. the meaning of two signs occurring in close proximity. The principle is familiar from examples like this:

**EXIT**  
→

Because the word is adjacent to the arrow, it's easy for an interpreter to connect the two. This is why we don't hang the word *exit* on one side of the room and an arrow on the other. People won't see these two signs as connected. There's a similar imperative in turn-taking. If you want an utterance to be heard as a response, then it should be close to the utterance it is a response to.

But there's another reason for not unnecessarily delaying one's response. One of the many demands that human interaction places on us is the requirement to cooperate with our conversation partners. We do this by attending to what others are saying (so not attending to other things), and by responding in ways that are relevant and that carry the conversation along. If this sounds trivial, then next time you sit down to breakfast or dinner with your family or housemates, see what happens when you are intentionally uncooperative in interaction (Garfinkel 1967). Try not answering their questions, or changing the subject every twenty seconds, or challenging everything by asking 'Why do you say that?' or 'What exactly do you mean?' They will quickly get annoyed and they'll stay annoyed with you all day. Social interaction involves a commitment to carrying a joint project forward. To deliver a rapid response maximizes this forward progress, while to delay unnecessarily is, well, unnecessary.

This principle of cooperation is not only a guide for action, but a guide for interpretation. When a turn is delayed, this delay is interpreted against a default expectation of the kind of rapid response that would be most cooperative. Here's an example from a UK English telephone call in which Speaker A suggests that Speaker B come over and pick him up (Levinson 1983:335).

- A: What about coming here on the way?  
 ((silence))  
 A: Or doesn't that give you enough time?  
 B: Well no I'm supervising here.

After A makes his request, a silence is created by B's non-response. If A assumes B's contributions are guided by a cooperative principle, then B's delay cannot be random. B's silence indicates trouble in producing a response. One form of trouble is an unwillingness to produce a face-threatening response of non-compliance, in this case a rejection of A's request. Evidence that A interprets B's delay in this way is seen in A's next move: 'Or doesn't that give you enough time?' Speaker B then confirms in the last line that this was indeed the meaning of his earlier failure to respond.

The presumption of commitment in conversation can have far-reaching consequences. We're all familiar with getting into a conversation and then finding that it's not easy to get out. A colleague arrives at work and says 'I had the weirdest ride on the train this morning'. When you respond with 'Really? What happened?', you've made a binding social contract. You've effectively said (a) 'I want to hear what you're offering



to tell me' and (b) 'I'm going to listen to your story through to the end'. As a listener you'll display the reciprocity that you've committed to, for example by keeping your eye gaze directed towards the speaker, and producing signals like *uh-huh* that give or give off your attention to the ongoing story-telling. Until the story reaches completion, there is no cheap or easy way to extricate yourself from the conversation, e.g. by suddenly saying 'Okay see you later, bye' and leaving the room half way through the story. Because this commitment in conversation is a social contract, it gives you reasons for action that may be different from your desires (Searle, 2010).

Herb Clark's work on language usage has long stressed the significance of social commitment in interaction. Clark (2006) took the notion of social commitment and used it to analyze the results of Stanley Milgram's compelling 1960s social psychology experiments on authority and obedience (Milgram 1974). Milgram invited people to take part in a 'learning experiment'. Participants would monitor another man's progress in a memory test, and were required to administer electric shocks to the man whenever he made errors. They did not know that this man was a confederate, or that the shocks were fake. Subjects found themselves administering shocks that they believed were painful, harmful – even fatal – to a man they'd just met, under instructions from experimenters they'd just met. Milgram's results were interpreted as having to do with obedience to social authority. Clark's analysis emphasises the power of the social commitments involved. A subject makes a social contract with the experimenter, and this social contract creates conflicting motivations for action. Many subjects in Milgram's experiments found it easier to carry out to the end the project they had committed to – namely, finishing the experiment that required them to give electric shocks to another man – even if they had not foreseen that the project would require them to act against another local desire (in this case, the desire not to harm others). We experience this conflict in conversation as well. After you've committed to hearing someone's story by saying 'Really? What happened?', you're highly likely to listen through to the story's conclusion and give an appropriate response, no matter how bored you may have become. The cost of sticking with it to the end is evidently much lower than the cost of abandoning the project half way through and betraying the social commitment you made at the outset.

The cooperative principle in conversation and related facts about the timing of responses to questions are the tip of the iceberg when it comes to turn-taking. Turn-taking is a complex, multi-faceted phenomenon. In addition to the moral aspects just discussed, the many properties of turn-taking as a system are barely understood and their cross-linguistic validity has yet to be tested. These properties include projection, speaker selection, turn design, reciprocity, response relevance, transition-time calibration, and sequence organization (Sacks, Schegloff, and Jefferson 1974; Schegloff 2006, 2007b). Turn-taking is a domain of language and sociality that will generously repay further work.

## SYSTEM TRANSMISSION

How is it that languages can exist above and beyond the minds and the lifetimes of their speakers? How are these systems distributed in space and transmitted through time? At birth, we inherit not only a genetic makeup from our parents (and a line of genetic inheritance before them going back to the beginning of life), we also inherit a system of culture and language that forms a niche in the social environment we happen to be born into. For both tracks in this dual inheritance model – genes and culture – a Darwinian approach posits variation in the qualities of individuals in populations, inheritance of these qualities through some form of replication, and selection of variants through competition (Darwin 1859; Mayr 1970; Hull 1988).

To understand how this applies to cultural systems such as languages it is necessary to think in terms not of the replication of whole systems but the replication of linguistic items or features (Nettle 1999; Croft 2000; Muysken 2008), i.e. individual features of language such as words and grammatical constructions. Why? Because individual pieces of language are the things that are reproduced and copied and passed across in face-to-face interaction. No specifiable causal process of replication operates on whole systems. Replication occurs at the level of utterances and the linguistic items they are made up of. The causal site of this replication, and therefore of the entire process of linguistic transmission, is face-to-face interaction.

A linguist's job is to describe the modern products of historical processes. As the philosopher of language Ruth Garrett Millikan (1984:3) points out, if a linguistic device exists, this is proof that it has 'served (communicative) functions' and has 'received stable reactions from cooperating partners'. The repeated functional success of a linguistic item at the micro level is criterial for its aggregated success at the macro level through finite (though enormous) chains of social transmission. The causal processes of transmission are well understood thanks to a rich tradition of sociological research on diffusion of innovations (Rogers 1995).

Once we understand why something has become a convention – why it succeeded as an innovation – we will understand what causes an innovation to survive and thrive. The goal is to identify the biases that operate on the transmission of innovations, making sure not to let the analysis become abstract or metaphorical by losing sight of its concrete expression in chains of instances of social interaction, the key locus of the causal process. Transmission biases will affect the career path of innovations by (1) affecting the rate or likelihood of exposure to bits of language, for example through causing them to come into social contact with innovators, (2) affecting the ease and manner in which the innovations are cognitively represented (e.g. due to learning), and by (3) affecting exposed agents' tendency to reproduce these bits of language and thereby expose others to them in turn.

A range of factors can serve as biases in transmission. Consider some examples from the case of structural convergence across language borders in mainland Southeast

Asia (see Enfield 2003, 2005). The modern introduction of national frontiers has helped to restrict linguistic transmission between nations, on the one hand, while enhancing transmission within nations' borders, on the other. The spread of non-linguistic aspects of culture, such as Buddhist religion from the West, has served to promote the transmission of associated linguistic systems (e.g. words from classical Indic languages such as Pali). Economic activity has brought people into contact with other languages; for example English in post Second World War economic activity, or deeper economic and administrative relations such as in the case of Vietnam's servitude to China. More than a millennium of domination by the Chinese transformed the Vietnamese language radically from its former structure. Geography and its relationship to the livelihoods of different ethnolinguistic groups has promoted inter-ethnic contact. In vast areas of mainland Southeast Asia, certain ethnolinguistic groups will prefer to seek out flat lands where they can carry out wet rice farming in paddies (e.g. speakers of languages from the Tai language family), while other ethnolinguistic groups will prefer to seek out the hillside land that supports a different kind of rice (and other) agriculture (e.g. speakers of languages from certain branches of the Austroasiatic language family). Because mainland Southeast Asia has the geography that it has, people of different ethnolinguistic groups come into close proximity (Leach 1964/1954), thereby increasing the likelihood of exposure to elements of each other's languages and the subsequent spread of these elements. Finally, there are personality differences among the people who make up the populations in which language is spread and who cause pieces of language to spread and aggregate into systems in human populations. These differences play a role in the success or failure of certain innovations. Some people are more gregarious, more well-travelled, more likely to travel further afield, and therefore more likely to come into contact with innovations. Of these, some will be more likely to be innovators while others will be more conservative, thus determining the likelihood of their reproducing any innovation they have encountered when they go to further villages, thus exposing others in turn. And of those that reproduce these innovations, some will be more charismatic than others and therefore more likely to be imitated.

These varied biases belong to a model of transmission of entire linguistic systems grounded in processes that operate on individual pieces of language. These pieces are circulated at ground level in sequences of social interaction, and this process drives the eventual macro-level effect of system transmission. We have a strong intuition that languages do somehow get reproduced and passed on as a whole through generations. When a child learns the language of her ethnolinguistic group, we do not hesitate to say that she has more or less reproduced the entire language. But let us not forget that this is shorthand. There is no single causal event of the language getting reproduced, parallel for instance to what happens when a new organism instantly acquires its entire genome in a sexual reproductive event. Instead, the child constructs the language piece

by piece. The process occurs critically in the early years of life when the child has a highly restricted social circle and when she is engaged in intensive and almost exclusive social interaction with people of her own ethnolinguistic group (with whom, incidentally, she is most likely to be genetically related, leading in normal circumstances to the non-necessary common evolution of genes and language). At the very core of the language acquisition process is the essentially social environment of family and community, and the essentially social process of communication. Linguistic knowledge is, therefore, in the words of Wolfgang Klein, ‘essentially **social**’ (Klein 1996:104). Or, as he then adds, ‘**essentially** social’.

In a natural, causal account of linguistic transmission and change, the units of analysis will be (1) the linguistic items that form the parts of a language and that comprise populations of items or ‘memes’ in a community, (2) the people that make up the populations that carry these systems psychologically and use them in communication, and (3) the face-to-face interactions that create the causal chains which define the history of these systems. These are the elements of an epidemiological approach to language transmission and change (Enfield 2008; cf. Sperber 1985; Sperber 2006).

#### CONCLUSION

We began with Chomsky’s question: ‘What contribution can the study of language make to our understanding of human nature?’ His own answer was that ‘human languages are instantiations of the same fixed biological endowment’ and that ‘they “grow in the mind” much like other biological systems’ (Chomsky 2002). This doesn’t tell us much about human nature. I think there’s a different answer, and it is this. Language shows us the essentially social nature of human nature. It shows us this in numerous ways, and these ways show us why Chomsky’s answer can’t be right. For one thing, language doesn’t grow like an organ. Language is constructed. It’s constructed in the minds of those who learn and use it, in the communities that exist and persist above and beyond those minds and individual lifetimes, and in the real time utterances that link people in social interaction. For another thing, language is less like an organ and more like an organism. Like organisms, languages speciate. Evans points out that linguistics is not so much like logic or mathematics, but rather ‘much more like the life sciences where the discovery of strange and unimagined new species constantly makes us revise our ideas of what is biologically plausible’ (Evans 2010:45). Hence the need to take linguistic diversity seriously.

So if we want to know human nature through language, we need to know the diversity of human nature’s linguistic products. In the three domains discussed above – linguistic reference, social interaction, and system transmission – two have received a good deal of research. Resources for linguistic reference have been well mapped in the deep history of grammatical tradition. And system transmission is intimately known from years of philology and sociolinguistics (though both are in urgent need of further

work, especially in areas of the world that have been less studied). But the structures of social interaction remain uncharted territory. We know little about their form and variation globally. The solution to this gap in our knowledge is to seek diverse forms of life in the wild, to describe and properly categorize these forms of life, and to systematically compare them in all their global forms. This will move us towards a comparative tradition of research on structures of social interaction, i.e. towards a typology of language use.

#### ACKNOWLEDGEMENTS

My first thanks go to those at Radboud University Nijmegen who generously supported my appointment, devoting both time and energy to making it happen: Ans van Kemenade, Paul Sars, Roelof de Wijkerslooth, Bas Kortmann, and in particular Pieter Muysken. Thank you Pieter for your support and confidence in me.

Second, I thank all those who have supported and helped develop my work at the Max Planck Institute for Psycholinguistics: the library, the technical group, the administration, the secretariat, and the directorate. I owe a special debt to a long list of colleagues in the Language and Cognition Group, of whom I shall only name a few: Melissa Bowerman, Penny Brown, Michael Dunn, Sotaro Kita, Asifa Majid, J.P. de Ruiter, Gunter Senft, Edith Sjoerdsma, Tanya Stivers, Angela Terrill, and Steve Levinson. Steve is responsible for the entire intellectual adventure. He invited me to join, he gave his full trust and support, and he provided the resources, not least of which is sheer inspiration.

Third, I thank family for life support. I have dedicated all my major works to family members, from my uncle Mel – a language teacher whose dog was named *Chomsky* – to my mother Margie, my wife Na, my sister Sam, and my brother Matt. Conspicuously absent from this list is my father John. He was on his death-bed when I received my first university results as an undergraduate student having begun to study linguistics seriously for the first time in 1992. His reaction when I visited him in hospital to show off my first results and my new enthusiasm was this: ‘Nick – one day you’re going to be a professor’. Was this a miraculous prediction of an event that would take place 17 years in the future, or might there have been a causal relation between what he said and what’s happened here today?

I dedicate this inaugural lecture to the memory of my father John David Enfield.

*Ik heb gezegd.*



## REFERENCES

- Austin, J. L. 1962. *How to do things with words*. Cambridge, MA: Harvard University Press.
- Berkum, Jos van, Danielle van den Brink, Cathelijne M. J. Y. Tesink, Miriam Kos, and Peter Hagoort. 2008. The neural integration of speaker and message. *Journal of Cognitive Neuroscience* 20 (4):580-591.
- Brown, Roger, and A. Gilman. 1960. The pronouns of power and solidarity. In *Style in language*, edited by T. A. Sebeok. Cambridge, MA: MIT Press.
- Chomsky, Noam A. 1968. *Language and mind*. New York: Harcourt Brace Jovanovich.
- Chomsky, Noam A. 2002. Chomsky's revolution: an exchange. *New York Review of Books* 49 (12, July 18, 2002).
- Clark, Herbert H. 2006. Social actions, social commitments. In *Roots of human sociality: culture, cognition, and interaction*, edited by N. J. Enfield and S. C. Levinson. London: Berg.
- Croft, William. 2000. *Explaining language change: an evolutionary approach*. Harlow: Longman.
- Darwin, Charles. 1859. *On the origin of species by means of natural selection*. London: John Murray.
- Dunbar, Robin I. M. 1996. *Grooming, gossip and the evolution of language*. London: Faber and Faber.
- Dunbar, Robin I. M. 2003. The social brain: mind, language, and society in evolutionary perspective. *Annual review of anthropology* 32:163-181.
- Duncan, Starkey. 1974. On the structure of speaker-auditor interaction during speaking turns. *Language in Society* 3:161-180.
- Eibl-Eibesfeldt, Irenäus. 1970. *Ethology*. New York: Holt and Rinehart.
- Enfield, N. J. 2003. *Linguistic epidemiology: semantics and grammar of language contact in mainland Southeast Asia*. London: RoutledgeCurzon.
- Enfield, N. J. 2005. Areal linguistics and Mainland Southeast Asia. *Annual review of anthropology* 34:181-206.
- Enfield, N. J. 2007. Meanings of the unmarked: How 'default' person reference does more than just refer. In *Person reference in interaction: linguistic, cultural, and social perspectives*, edited by N. J. Enfield and T. Stivers. Cambridge: Cambridge University Press.
- Enfield, N. J. 2008. Transmission biases in linguistic epidemiology. *Journal of Language Contact* 2:295-306.
- Enfield, N. J. 2009. *The anatomy of meaning: speech, gesture, and composite utterances*. Cambridge: Cambridge University Press.
- Enfield, N. J., and Stephen C. Levinson. 2006a. Introduction: human sociality as a new interdisciplinary field. In *Roots of human sociality: culture, cognition, and interaction*, edited by N. J. Enfield and S. C. Levinson. Oxford: Berg.
- Enfield, N. J., eds. 2006b. *Roots of human sociality: culture, cognition, and interaction*. London: Berg.
- Evans, Nicholas. 2010. *Dying words: endangered languages and what they have to tell us*. Chichester: John Wiley and Sons.
- Fodor, Jerry A. 1987. *Psychosemantics*. Cambridge, MA: MIT Press.
- Frith, Chris D., and Uta Frith. 2007. Social cognition in humans. *Current Biology* 17:R724-R732.
- Garfinkel, Harold. 1967. *Studies in ethnomethodology*. New Jersey: Prentice-Hall.
- Goffman, Erving. 1981. *Forms of talk*. Philadelphia, PA: University of Pennsylvania Press.
- Grice, H. Paul. 1989. *Studies in the way of words*. Cambridge, Massachusetts: Harvard University Press.
- Hinde, Robert A., ed. 1972. *Non-verbal communication*. Cambridge: Cambridge University Press.

- Hull, David L. 1988. *Science as a process: an evolutionary account of the social and conceptual development of science*. Chicago: University of Chicago Press.
- Hymes, Dell H., ed. 1964. *Language in culture and society: a reader in linguistics and anthropology*. New York: Harper & Row.
- Jakobson, Roman. 1960. Concluding statement: linguistics and poetics. In *Style in language*, edited by T. A. Sebeok. Cambridge, MA: MIT Press.
- Klein, Wolfgang. 1996. Essentially social: on the origin of linguistic knowledge in the individual. In *Interactive minds: life-span perspectives on the social foundation of cognition*, edited by P. B. Baltes and U. M. Staudinger. Cambridge: Oxford University Press.
- Land, Victoria, and Celia Kitzinger. 2005. Speaking as a lesbian: correcting the heterosexist presumption. *Research on Language and Social Interaction* 38 (4):371-416.
- Leach, Edmund. 1964/1954. *Political systems of highland Burma*. London: The Athlone Press.
- Levinson, Stephen C. 1983. *Pragmatics*. Cambridge: Cambridge University Press.
- Levinson, Stephen C. 2000. *Presumptive meanings: the theory of generalized conversational implicature*. Cambridge, MA/London: MIT Press.
- Mayr, Ernst. 1970. *Populations, species, and evolution*. Cambridge and London: Belknap Press of Harvard University Press.
- Mead, George Herbert. 1934. *Mind, self, and society*. Chicago: University of Chicago Press.
- Milgram, Stanley. 1974. *Obedience to authority: an experimental view*. New York: Harper & Row.
- Millikan, Ruth Garrett. 1984. *Language, thought, and other biological categories*. Cambridge, MA: MIT Press.
- Muysken, Pieter, ed. 2008. *From linguistic areas to areal linguistics*. Amsterdam: John Benjamins.
- Nettle, Daniel. 1999. *Linguistic diversity*. Oxford: Oxford University Press.
- Rogers, Everett M. 1995. *Diffusion of innovations*. (Fourth edition.) New York: The Free Press.
- Sacks, Harvey, and Emanuel A. Schegloff. 2007/1979. Two preferences in the organization of reference to persons in conversation and their interaction. In *Person reference in interaction: linguistic, cultural, and social perspectives*, edited by N. J. Enfield and T. Stivers. Cambridge: Cambridge University Press.
- Sacks, Harvey, Emanuel A. Schegloff, and Gail Jefferson. 1974. A simplest systematics for the organization of turn-taking for conversation. *Language* 50 (4):696-735.
- Schegloff, Emanuel A. 2006. Interaction: the infrastructure for social institutions, the natural ecological niche for language, and the arena in which culture is enacted. In *Roots of human sociality: culture, cognition, and interaction*, edited by N. J. Enfield and S. C. Levinson. Oxford: Berg.
- Schegloff, Emanuel A. 2007a. Conveying who you are: the presentation of self, strictly speaking. In *Person reference in interaction: linguistic, cultural and social perspectives* edited by N. J. Enfield and T. Stivers. Cambridge: Cambridge University Press.
- Schegloff, Emanuel A. 2007b. *Sequence organization in interaction: a primer in conversation analysis, volume 1*. Cambridge: Cambridge University Press.
- Searle, John R. 2010. *Making the social world: the structure of human civilization*. Oxford: Oxford University Press.
- Sperber, Dan. 1985. Anthropology and psychology: towards an epidemiology of representations. *Man* 20:73-89.



- Sperber, Dan. 2006. Why a deep understanding of cultural evolution is incompatible with shallow psychology. In *Roots of human sociality: culture, cognition, and interaction*, edited by N. J. Enfield and S. C. Levinson. Oxford: Berg.
- Stivers, Tanya. 2007. Alternative recognitionals in person reference. In *Person reference in interaction: linguistic, cultural, and social perspectives*, edited by N. J. Enfield and T. Stivers. Cambridge: Cambridge University Press.
- Stivers, Tanya, N. J. Enfield, Penelope Brown, Christina Englert, Makoto Hayashi, Trine Heinemann, Gertie Hoymann, Federico Rossano, Jan Peter de Ruiter, Kyung-Eun Yoon, and Stephen C. Levinson. 2009. Universals and Cultural Variation in Turn-Taking in Conversation. *Proceedings of the National Academy of Sciences of the United States of America* 106 (26):10587–10592.
- Tiger, Lionel, and Robin Fox. 1966. The zoological perspective in social science. *Man (new series)* 1 (1):75-81.
- Tomasello, Michael. 2008. *Origins of Human Communication*. Cambridge, MA: MIT Press.
- Vygotsky, Lev S. 1962/1934. *Thought and language*. Cambridge, MA: MIT Press.

#### ENDNOTES

- 1 Whether or not this were correct, it's not clear it would be useful. As Jerry Fodor (1987:9) puts it, 'even if psychology were dispensable in principle, that would be no argument for dispensing with it.'



