

Grammatical change and generative theory

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Øystein Alexander Vangsnes

Rector! Honored Dean! Distinguished Members of the Committee! Ladies and Gentlemen!

1. Introduction

Languages are in a constant state of flux. It seems that for any speech community, given a reasonable period of time, the speech or records of it at one end of the time span can be considered different from the speech at the other. This is the case if we compare the language spoken by natives of Bergen today with the speech of people in Bergen 800 years ago, and it is certainly the case if we compare the speech of present-day Romans with the language spoken in the Rome of Julius Cæsar more than 2000 years ago. In both cases the speech at the two points of the time axis is quite different, in fact so different that we perceive the varieties as different *languages*, on the one hand contemporary Bergen Norwegian versus Old Norse, and on the other contemporary Roman Italian versus classical Latin.

As an illustration of how Old Norse is different from contemporary Norwegian, consider the examples in (1) and (2). The sentence in (1a) is taken from the Old Norse text *The King's Mirror* (*Speculum Regale*) from the 13th century, and the sentence in (1b) represents a word by word translation into modern Norwegian.

- (1) a. En til þærs skal hava harða steina oc stora at briota væggi stora niðr.
- b. Men til det skal ha harde steinar og store å bryta vegger store ned
 but for that shall have hard stones and big to break walls big down
 ‘But for that one should have big and hard stones to break down the big
 walls down.’

I think that most people in the audience would agree that *that* is a peculiar way of expressing oneself nowadays—a more idiomatic way of doing it would be to use the sentence in (2).

- (2) Men til det skal **ein** ha store og harde steinar å bryta dei store veggene ned (med).

Even without me specifying it for you I am sure you realize that the differences are both syntactic and morphological as well as phonological in kind.

So, the properties of Old Norse changed and we got contemporary Norwegian. Likewise, Latin changed and we got Italian. These changes didn't take place overnight, however—we are pretty sure of that. It took generations of people, and it happened gradually. In both cases we are able, partly through written records and partly through hypothesizing, to reconstruct successive stages which ultimately led from the classical idioms to the contemporary ones. The changes can to a large extent be labelled 'grammatical changes', and in this lecture I will consider in what sense grammatical changes arise and in particular what view linguists within the generative tradition have of this, i.e. the tradition which has the American linguist Noam Chomsky as its most prominent proponent.

In order to do this it's necessary to consider what is meant by 'grammar', and subsequently 'grammatical', for it's a crucial point that this notion has a meaning within the generative research tradition which is quite different from what we may call the every day sense of the word 'grammar'.

But before we do so, let us consider a couple of examples of what appears to be grammatical changes in a contemporary dialect of Norwegian, more specifically the dialect of my home town, Leikanger.

1. Grammatical change in the Leikanger dialect

In my father's speech I observe a distinction between nominative and non-nominative of the 2. person plural personal pronoun. Consider the examples in (3) to (5) which are constructed, but in accordance with the speech of my father's—the pronoun in question is bold face.

- (3) **Di** ska fá noe o gle'rikka ti.
you-PL shall get something to look-forward'you-PL to
'You will get something to look forward to.'

(4) Eg hadde gjedna gitt **dikka** noke o gle'rikka ti.
 I had gladly given you-PL something to look-forward'you-PL to
 'I would gladly have given you something to look forward to.'

(5) Eg snakke nett om **dikka**.
 I talked just about you-PL
 'I just talked about you.'

As you can see the second person plural pronoun has a particular form, *di*, when it is the subject of the sentence and this form is different from the form it has when it is the object or governed by a preposition, i.e. *dikka*. The distinction corresponds to the one between *de* and *dykk* in written Nynorsk Norwegian. Moreover, the observant ones of you will notice a third form *rikka*, but this is really just the cliticized and/or weak form of *dikka* which occurs in certain phonological contexts, and I will keep it out of the discussion here.

My intuitions on this matter correspond to those of my father's—we both feel that it is not correct to replace the two forms with each other as I have done in (6) to (8).

(6) **Dikka** ska fá noke o gle'rikka ti.
 you-PL shall get something to look-forward'you-PL to
 'You will get something to look forward to.'

(7) Eg hadde gjedna gitt **di** noke o gle'rikka ti.
 I had gladly given you-PL something to look-forward'you-PL to
 'I would gladly have given you something to look forward to.'

(8) Eg snakke nett om **di**.
 I talked just about you-PL
 'I just talked about you.'

On the other hand, in the speech of my 12 year old niece (who's present in the audience, BTW) and her friends and playmates I frequently hear the form *dikka* used in subject position. In other words she could very well produce a sentence like (6). However, I never hear her use the form *di* in non-subject positions—in fact I do not

hear her use the form *di* at all. That then indicates that this form is absent from her language, and that the form *dikka* is the only second person plural personal pronoun.

Another phenomenon where the speech of my father's differs from that of my niece's involves *wh*-questions. In standard Norwegian *wh*-questions the finite verb always comes as the second constituent of the sentence just as it does in declarative main clauses, a phenomenon known from all the Germanic languages and frequently referred to as 'verb second'. This is exemplified by the sentence pair in (9)—“Kva sa jordmora” is fine, but “Kva jordmora sa” is not.

- (9) a. Kva **sa** jordmora?
 what said midwife-DEF
 ‘What did the midwife say?’
 b. *Kva jordmora **sa**?

My father reports that his intuitions allow him to place the finite verb in the third position in *wh*-questions, but only as long as the initial *wh*-word, i.e. the question word, consists of only one syllable. Accordingly, he is comfortable with saying both the sentences in (10), but of the sentences in (11) involving a di-syllabic question word he only approves of the one observing verb second, i.e. (11a) (“**Kefø sa jóramóri da**” as opposed to (11b) “**Kefø jóramóri sa da**”).

- (10) a. Ke **sa** jóramóri?
 what said midwife-DEF
 ‘What did the midwife say?’
 b. Ke jóramóri **sa**?
- (11) a. Kefø **sa** jóramóri da?
 why said midwife-DEF that
 ‘Why did the midwife say that?’
 b. Kefø jóramóri **sa** da?

For my niece, however, both (11b) and (10b) are fine, and I frequently observe her uttering *wh*-questions where an initial non-subject *wh*-word or *wh*-phrase contains more than one syllable, and where the subject precedes the finite verb; in other words sentences which do not exhibit verb second.

Accordingly, we can conclude that my niece's speech differs from that of her grandfather on at least two points: (i) with respect to the form and distribution of the

second person plural personal pronoun and (ii) with respect to the placement of the finite verb in *wh*-questions. Their judgments of the sentences discussed here can be summarized as in table 1 where the asterisk according to standard conventions marks disapproval.

	(3)	(4)	(5)	(6)	(7)	(8)	(10a)	(10b)	(11a)	(11b)
GJV ((grand)father)	OK	OK	OK	*	*	*	OK	OK	OK	*
RMV(niece)	*	OK	OK	OK	*	*	OK?	OK	OK?	OK

Table 1: *Two speakers of the Leikanger dialect and their judgments*

But both my niece and her grandfather, i.e. my father, are speakers of what we would call the Leikanger dialect. They both live in Leikanger, they are members of the speech community there, and what's more their speech is quite representative of their age groups. That's my feeling at least, especially if we consider only these two particular grammatical phenomena.

I admit to not having performed any thorough investigations on the matter, but let us assume, for the sake of the argument, that my feeling is basically right. That then means that the contemporary Leikanger dialect exhibits linguistic variation.

Moreover, given the correlation between the two varieties and the age of the speakers, it appears reasonable to categorize the variation as a grammatical *change*, more specifically as a change in progress.

The convenience of considering grammatical change in a contemporary dialect or language as opposed to historical stages of a language is of course that we have much better control of the empirical issues involved. We can identify the speakers, we know their age, we can consult their judgments, and we have, at least potentially speaking, access to much more data. Thereby we avoid the well-known methodological dilemmas of historical linguistics which on the most part is confined to studying language through finite, and often relatively small, corpora of written records.

We will return to these issues in the Leikanger dialect later. Let us now consider the notion of 'grammar'.

2. Grammar

When we study the language of a speech community at a certain stage in time the description we give of it is what most people understand as a grammar. In this sense a 'grammar' is a set of descriptions and generalizations, actual or potential, stated by linguists of the language used by a particular speech community. This book [*Norsk Referansegrammatikk*] of approximately 1300 pages is a grammar of contemporary Norwegian, and this 160 page book [*Latinsk grammatikk*] is a grammar of classical Latin. The descriptions and generalizations found in books like these are arrived at on the basis of studies of a variety of spoken and/or written samples of linguistic expressions from a variety of members of the speech community in question, or they can also be arrived at by consulting various speakers' intuitions about what well-formed tokens of their speech should look like. The word 'grammar' also has a sense which denotes this activity as such, i.e. the study of language.

Under these senses then 'grammar' is either a particular kind of human activity or the derivate of such activity, in other words social artifacts. A grammar is an abstract and supra-individual entity sometimes materialized as a collection of statements, say, in a book.

Now, a concept of grammar similar to what I have described so far is recognized by generative linguists as well. However, within generative theory 'grammar' also has a quite concrete and non-artifact meaning. More specifically a grammar is understood as a mental object, located in the brain of the individual human being: it is the cognitive capacity which determines what the shape of well-formed linguistic expressions are for a particular human being.

This other notion of 'grammar' can be related to the distinction between two technical concepts of *language* made by Chomsky in his 1986 book *Knowledge of Language*. There he draws a distinction between externalized and internalized language, or for short 'E-language' and 'I-language', respectively.

According to Chomsky (1986:20) E-language refers to language understood "independently of the mind/brain", as **[quote]** "a collection (or system) of actions or behaviors of some sort" **[unquote]**. Furthermore he says :

[quote] From a point of view such as this, a grammar is a collection of descriptive statements concerning the E-language, the actual or potential speech events (perhaps along with some account of their context of use or semantic content). In technical terms, the grammar may be regarded as a function that enumerates the elements of the E-language. **[unquote]**

(Chomsky 1986:20)

An important point about grammars of E-languages is that if two distinct grammars both successfully account for a particular E-language, we have no reason to prefer one of them over the other. In fact, the grammars as such are of secondary interest. As Chomsky puts it:

[quote] The E-language is [...] understood to be the real object of study. Grammar is a derivative notion; the linguist is free to select the grammar one way or another as long as it correctly identifies the E-language. Apart from this consideration, questions of truth and falsity do not arise. [unquote]
(Chomsky 1986:20)

In contrast to E-language and grammars of E-languages, Chomsky defines the notion of I-language which he takes to be :

[quote] [...] some element of the mind of the person who knows the language, acquired by the learner, and used by the speaker-hearer.
Taking language to be I-language, the grammar would then be a theory of the I-language, which is the object under investigation. And if, indeed, such a "notion of structure" exists [...] then questions of truth and falsity arise for grammar as they do for any scientific theory. [unquote]
(Chomsky 1986:22)

Importantly, the concepts of E-language and I-language are not mutually exclusive. On the contrary, they are complementary, and the relationship between the two is that whereas E-language represents observable linguistic expressions produced by a speaker, I-language represents the knowledge, both tacit and conscious, that the speaker puts to use when producing linguistic expressions. And correspondingly for a listener I-language is the knowledge put to use when processing tokens of E-language.

Since I-language is related to the individual there are as many I-languages as there are speakers. Two I-languages may have identical properties, but we are really in no position to know. If two I-languages generate observable E-languages with identical properties, we may suspect that the I-languages have identical properties. On the other hand if two E-languages show different properties we can *conclude* that the underlying I-languages have different properties.

In the case of my father versus my niece, then, we can conclude that their I-languages have different properties since they allow for differing properties in the actual linguistic utterances, i.e. in their E-language.

Chomsky (1986:22) advocates a shift in focus from the study of E-language to the study of I-language, and this way he firmly places the study of language in the psychological and biological sciences. The crucial point of this shift of focus is that the

linguist is not free to model grammar in any arbitrary way. Grammar is now the study of a mental object which is determined by the physiological windings of the human brain, windings that are genetically given and therefore common to all members of the species, irrespective of whether the individual brain belongs to a speaker of Norwegian, Japanese, Malagasy, or Quechua. As a consequence the grammar modelled by the linguist must have properties that are universally applicable, and the questions of truth and falsity noted by Chomsky pertain to whether the grammar is a correct description of the human language faculty physiologically and psychologically understood.

Before we proceed it is worth mentioning that Chomsky is not the first to promote a view of language as a mental object related to the individual speaker. He himself (Chomsky 1986:21f) attributes his view to Jespersen (1924), and as noted by Lightfoot (1999:78) the neo-grammarians Hermann Paul held forth a view of language as an object related to the individual speaker when he wrote in 1877 "dass die reelle Sprache nur im Individuum existiert" and in 1880 that "[w]ir müssen eigentlich so viele Sprachen unterscheiden als es Individuen gibt". But it seems fair to say that until the emergence of generative grammar the focus of linguistics has been on language in its supra-individual, social sense.

3. Language acquisition

Not all linguists, not to say psychologists, accept the idea that there exists a genetically given language faculty which is distinct from other cognitive capacities that human beings possess. Now, the central arguments generative linguists give in favor of their view concern language acquisition.

Within a period of 4 to 8 years from the day of birth children develop from a state of being able to neither produce nor adequately process linguistic expressions to a state where they are fluent speakers of the language of their speech community.

This is a relatively short period given the immense complexity any language constitutes: linguists can spend a whole life investigating a language and still only come up with more or less adequate descriptions of it, whereas children acquire a perfect knowledge of their mother tongue unconsciously within a few years.

Chomsky and other generative grammarians argue that the rapid acquisition of language by children is possible only if the child has a good portion of knowledge of language already by birth. This view is sometimes referred to as the 'nativist view'.

The argument has been disputed, and it would lead too far here to discuss the issue in full length.

4. Language difference: principles and parameters

In any event, under the chomskyan view, language understood as I-language springs from a common genetic source shared by all human beings (disregarding of course individuals with certain genetic impairments pertaining to the brain).

But the languages of the world differ greatly. The properties of Norwegian are quite different from those of Japanese, so whereas it is quite plausible that the grammar of two speakers of Norwegian differ only minimally, it is equally plausible that the grammar of a speaker of Japanese in turn differs substantially from the grammars of the two Norwegians. Accordingly, although a grammar of an I-language must have universal properties, its design must also be such that it can differ from other grammars of other I-languages, and the linguist needs a theory of how the various grammars can come to differ given a common genetic and physiological platform.

The theory offered in that respect is a theory of *what* the genetically given language faculty specifies and a theory of *how* language is acquired. In essence the chomskyan view of language acquisition is that the language faculty, genetically understood, specifies two kinds of principles, on the one hand fixed principles of grammar and on the other open principles which find a further specification on the basis of input from the linguistic environment of the child.

The latter open principles are generally referred to as ‘parameters’, and the process which the child undergoes from the moment of birth to the point where it is a fluent speaker of a particular language is referred to as a process of ‘parameter setting’. This way the evolvement of I-language is seen as the product of the interaction between nature and nurture: the genetically determined universal principles represent nature, or the linguistic ‘genotype’, whereas the exposure to E-languages, represent nurture. The resulting setting of parameters yields a speaker’s I-language, the linguistic ‘phenotype’. (The biological terms here are taken from Lightfoot (1991, 1999) who moreover refers to the exposure to E-language during the language acquisitional process as the ‘triggering experience’).

The nature of the fixed principles and open parameters proposed in the generative literature can be quite abstract and not always easy to illustrate, in particular not

the former, but as a fairly straightforward example we may consider the constituency of a transitive sentence like the one in (12).

(12) John kicked the ball.

It seems that for all natural languages one can give arguments to the fact that the verb and the object in a sentence like this make up a constituent independent of the subject, in other words that we have on the one hand "kick the ball" and on the other "John". This is the well-known distinction between subject and predicate or subject and verb phrase.

However, languages differ with respect to whether the object follows the verb as in English or whether it precedes it as in the Japanese equivalent of (12) given in (13)(which I am not going to pronounce).

(13)	John-ga	boru-o	ketta.	<i>Japanese</i>
	John-NOM	ball-ACC	kicked	

This difference between English and Japanese can be related to a parameter, which then means that the language faculty does not specify the word order of the constituents of a transitive verb phrase: the specification is determined by the triggering experience in the period when the child acquires its language.

Importantly, one parameter may govern what we perceive as different linguistic phenomena, and a well-known example from the literature is the suggestion the parameter which governs the linearization of verbs versus their objects also governs the linearization of prepositions and their complement noun phrase: in English prepositions precede their noun phrases, whereas in Japanese the equivalents of prepositions follow their noun phrases, and are therefore not surprisingly called *post-positions*. Compare the examples in (14).

(14)	a.	to Tokyo	<i>English</i>
	b.	Tokyo e	<i>Japanese</i>
		Tokyo to	

So on the one hand we have universal principles which say for instance that a verb and an object must make up a syntactic constituent and on the other hand we have language specific parameter settings which specify for instance what the linearization of certain constituent types is.

The notion of parameter then offers the central key to understanding how languages may differ although the language faculty is genetically given. Let us again consider the speech of my father and my niece. As you remember my father allows the finite verb to occur as the third constituent in *wh*-questions but only if the question word is monosyllabic. My niece, on the other hand, tolerates such a placement of the finite verb irrespective of how many syllables the question word contains. So my father finds a sentence like (10b) grammatical, but not a sentence like (11b), whereas my niece would approve of both. Their intuitions in turn differ from that of speakers of other Norwegian dialects who find both sentences ungrammatical, a feeling which is reflected in the standard written language, i.e. as illustrated in (15).

(10) b. Ke jóramóri sa?
 what midwife-DEF said
 ‘What did the midwife say?’

(11) b. Kefø jóramóri sa da?
 why midwife-DEF said that
 ‘Why did the midwife say that?’

(15) a. *Hva jordmora sa?
 b. *Hvorfor jordmora sa det?

According to the principles and parameters line of reasoning this variation means that some parameter is set differently in my father's and my niece's I-language, and in turn some other speaker, say Mrs. Johannesen, of some other Norwegian dialect, let's say the Oslo-dialect, has a third kind of parameter setting, disallowing *wh*-questions where the finite verb does not occur as the second constituent.

The exact nature of the parameter, or perhaps parameters, involved need not concern us immediately. The crucial point for the generative grammarian as to why the parameters are set differently is that the three speakers, my father, my niece, and Mrs. Johannesen from Oslo must have been exposed to a body of E-language which was different enough to yield the different parameter settings and thus the differing I-languages.

Schematically, we may now illustrate the relationship between I-language, E-language and language acquisition as in figure 1.

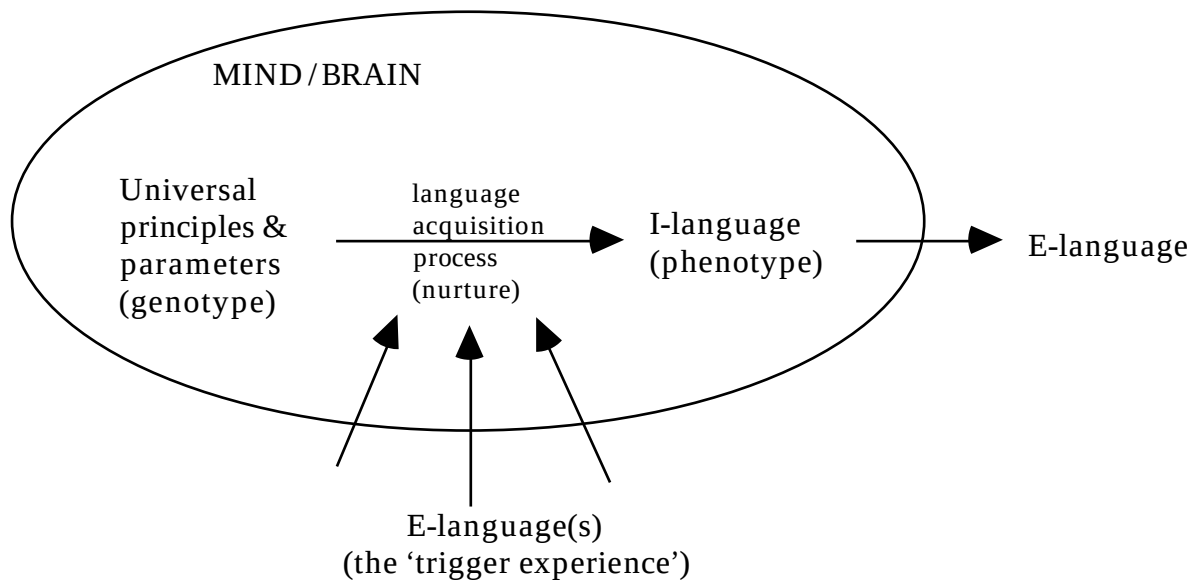


Fig. 1: *What's in and off a speaker's mind*

Now, when my father disapproves of the sentence in (11b) it's his knowledge of his own language which tells him that this is not the right way to say things for him. That is not something he learned in school, let's say because it's considered substandard and thus not appropriate for the written language. Far from it—it's something he simply feels. Likewise, my niece *feels* that sentence (11b) is fine, and Mrs. Johannesen *feels* that sentences like (15a) and (15b) both are unacceptable. Following conventional terminology we use the terms 'grammatical' and 'ungrammatical' to describe this feeling of approval or disapproval, respectively.

There are a few important points to make concerning the notion of 'ungrammaticality'. First of all, it is not physically impossible for a person to utter a sentence which he or she finds ungrammatical. I am quite certain of my father's capability of uttering the sentence in (11b).

Second, if my niece utters this sentence, which is grammatical for her, but ungrammatical for my father, it is perfectly intelligible—it means the same thing as the sentence in (11a) which is how my father would have chosen to word himself. In fact, even Mrs. Johannesen would probably be capable of understanding my niece uttering sentence (11b), provided of course that he managed to get beyond the potential phonological difficulties.

So with respect to successful communication the word order does not make any difference in this case, and in fact as speakers of Norwegian we frequently encounter instances of sentences with a word order which no native speaker of Norwegian would find grammatical. A rich source in that respect involves foreigners and

immigrants who have learned Norwegian as adults, and the phenomenon is probably known from any speech community in the world—it is incredibly difficult to learn a foreign language to perfection as an adult. But in many cases it is quite clear that mastery of for instance correct word order is not always necessary in order to obtain successful communication with natives.

Summarizing now, generative grammar is primarily concerned with language as a mental object, a cognitive capacity located in the mind/brain of individual human beings. Language in this individual and internalized sense, I-language, is the product of genetically determined universal principles and a language acquisitional process which appears to be completed well before puberty, and the properties of the language seem to remain stable from then on. Apparently, the only major exception with respect to stability concerns the lexicon—we keep learning new words throughout our life time.

5. The triggers of grammatical change

Having now achieved a fairly good understanding of what the generative view of language and grammar is, we are ready to consider how the concept of ‘grammatical change’ should be understood. In effect, the generative view of grammatical change more or less gives itself: it must be related to the I-language of the individual speaker, and it can only arise if the individual speaker during the language acquisitional process sets his parameters in a different way than what other individuals in the speech community did before him. The result is an I-language with different properties than the I-languages of other speakers, and that in turn may generate observable differences in the linguistic utterances which constitute their E-languages.

Accordingly, when we observe that two stages of a language display clearcut different grammatical properties it must be interpreted so that a widely distributed change in the parameter setting has taken place in the population. This is in fact the only possible way of seeing it, conceptually speaking, for the generative grammarian, and seminal works promoting this view of grammatical change are those of David Lightfoot, notably Lightfoot (1979).

How do changes in parameter setting occur then? Battye and Roberts (1995) envisage two main possibilities when an acquirer opts for some parameter setting which differs from the parents' I-language setting. It can arise, they say:

[New parameter settings may arise] **[quote]** either through some inherent "opacity" in the primary linguistic data which favours a novel analysis and

parameter setting on the part of the acquirer, or through some inherent preference on the part of the acquirer for one parameter setting over another. These two ways of choosing new parameter settings are by no means exclusive; indeed, it is likely that they very frequently coincide. [unquote]

Battye and Roberts (1995)

According to this view then new parameter settings arise either because the triggering experience contains evidence which leads the acquirer to set a parameter in a novel way, or because the triggering experience does not provide positive evidence for a particular parameter setting.

With respect to the latter type of scenario the so-called ‘Subset Principle’ of Berwick (1985) is of some relevance. The essence of this principle is that some parameter settings are unmarked whereas others require positive evidence. As an example, Berwick regards pro-drop as a marked option, i.e. the possibility of leaving out pronominal subjects, a phenomenon well-known from the Romance languages, and exemplified here by a Finnish example.

- (16) Pidän suomen puhumisesta
 like-1SG Finnish-GEN speaking-ELA
 ‘I like speaking Finnish.’

In order for the child to acquire an I-language with pro-drop the triggering experience must comprise a sufficient number of utterances with no overt pronominal subject. The parameter will then be set accordingly. If the evidence is not rich enough, the unmarked setting is that the I-language requires pronominal subjects to be pronounced on a par with non-pronominal subjects: instead of having an I-language where a subset of sentences will have certain characteristics, i.e. no overt subject, we then get an I-language where all sentences share the property of having a pronounced subject.

The core idea behind such a line of reasoning then is that if possible the child will opt for the simplest solutions, i.e. an I-language which requires fewer specifications for similar types of utterances. In other words, considerations of economy come into play.

If we apply this idea to the difference between the I-languages of my father and my niece with respect to *wh*-questions, we could possibly reason that my niece and other speakers of the Leikanger dialect in her generation have opted for a grammar which treats all *wh*-words alike instead of distinguishing between mono-syllabic *wh*-words and *wh*-words with more than one syllable.

Now, in turn one may wonder how an I-language of the type of my father's could arise at all. It is really beyond the scope of this lecture to address that, but let me tease your interest by saying that it may have to do with cliticization. Fronted *wh*-words are generally unstressed, and if we have a monosyllabic unstressed *wh*-word the result is an initial iambic foot (*Ke jòra-móri sa...*) whereas if we have a disyllabic *wh*-word we get an anapest (*Kefø jòra-móri sa...*) and so forth. In other words we may imagine that my father's kind of I-language has arisen on the basis of a certain prosodic categorization of *wh*-words, and that my niece's kind of I-language in turn has developed from that through a new syntactically based categorization of these grammatical elements. In any event this is an intriguing phenomenon which deserves further studies.

Now, with regard to the first kind of scenario mentioned by Battye and Roberts, the remarks I made about 'ungrammaticality' should be of some relevance. First of all, if someone for some reason starts to talk in a way which favors the use of certain utterance types, then the result may be an E-language which is substantially different from the one which originally served as the triggering experience for the I-language in question. When this new E-language type then serves as the triggering experience for new acquirers, it may lead them to set parameters in a new way since the E-language provides evidence for that.

What I have in mind here when I talk of a change or drift in linguistic *behavior* is what we normally think of as the object of study for sociolinguistics. It seems quite clear that speakers sometimes consciously or unconsciously choose to speak in certain ways for reasons that are entirely non-linguistic in nature: a certain way of talking may be fashionable, or it may serve as a social identity marker. We cannot pursue these matters here—the crucial point is that a change in linguistic behavior may result in a grammatical change once the product of the linguistic behavior serves as the triggering experience for new acquirers.

Likewise, if a substantial part of the triggering experience is comprised of ungrammatical but intelligible utterances produced by non-native speakers, that too may serve as evidence for novel parameter settings. In fact, I think it's safe to say that this is indeed one of the most clear sources for grammatical changes, namely what happens when two speech communities meet—many of the most clearcut and drastic linguistic changes that have taken place seem to be related to invasions and major migrations. Modern English could be given as an example in that respect, a language which evolved after the Norman invasion and the subsequent fusion of Anglo-Saxon and Norman French, showing grammatical properties of both of these sources, but importantly also entirely novel ones.

A modern case showing the same point is represented by the Swedish dialect spoken in Rinkeby, a suburb of Stockholm where more than 90% of the school-children have immigrant background: this dialect does not have obligatory verb second in main clauses, and thus allows sentences like the one in (17).

- (17) I-da ja tänker ge morsan en puss. *Rinkeby*
To-day I think give mum-DEF a kiss
‘Today I’m going to give Mummy a kiss.’

The verb second phenomenon is notoriously difficult to learn for people who do not have it in their native language, and it seems obvious that the lack of this feature in the Rinkeby dialect somehow must be related to the strong presence of non-Swedish languages in this community. Importantly however, there are thousands of people who have this dialect as their native Swedish dialect, a dialect they have acquired as small children, and in fact even quite a few of them have an all-Swedish ethnic background.

In present terms we may reason about this as follows. At some stage Rinkeby became inhabited by immigrants who acquired Swedish as adults. A substantial number of them never achieved mastery of the verb second phenomenon, a mastery which of course is not required in order to successfully communicate in Swedish. The body of non-native Swedish utterances produced by these people served as the triggering experience for new generations of inhabitants in Rinkeby, and these kids did not set their parameters so that their I-language would yield utterances which all observe verb second, the reason being simply that they did not find evidence for that in their triggering experience.

But contact and resulting grammatical changes need not involve what we perceive as different languages—it may also involve what we perceive as dialects. Let us again return to the Leikanger dialect, this time to what appears to be a change in the form and use of the 2nd person plural personal pronoun. As we heard in the beginning of this lecture my niece does not make a distinction between the subject and non-subject form of this pronoun, whereas my father does. First of all, let us note that this change is not really a syntactic change—rather it is a lexical and morphological one, related to this particular pronoun. My niece still makes a distinction between subject and non-subject forms in, say, 1st and 2nd person singular, i.e. as illustrated in (18), and what has happened in the new generation of speakers is that the original nominative form of the 2nd person plural pronoun, *di*,

simply has not been picked up, so to speak, and that the original oblique form *dikka* therefore has been generalized to all positions.

- (18) a. **Eg/*meg** ska gi **deg/*dú** it gott rá.
 I/me shall give you-SG.OBL/you-SG.NOM a good advice
 ‘I’ll give you a good piece of advice.’
- b. **Dú/*deg** kan gi **meg/*eg** it gott rá.
 you-SG.NOM/you-SG.OBL can give me/I a good advice
 ‘You may give me a good piece of advice.’
- c. Detta e it gott rá frá **meg/*eg** ti **deg/*dú**.
 this is a good advice from me/I to you-SG.OBL/you-SG.NOM
 ‘This is a good piece of advice from me to you.’

But what initiated such a neglect of the distinct nominative form? Well, Leikanger is characterized by having a significant number of inhabitants who come from other places in Norway, and we know that in most other Norwegian dialects there is no distinction between nominative and non-nominative forms of the 2nd person plural personal pronoun. This is reflected in the Bokmål written standard by the form *dere* and we know the form *dokker* from the Bergen dialect and similar forms from other dialects all along the coast of Norway. So the fact that the lack of distinction now also appears in the Leikanger dialect is really not surprising—a substantial part of the triggering experience for the new generations probably lacks the distinction.

Let me conclude.

6. Conclusion

In this lecture I have discussed the view that generative linguistic theory offers of grammatical change. I have kept the discussion at a fairly general level, focusing mainly on the conceptual sides of the topic, and I hope that I have made it clear what the principled view of grammatical change must be for the generative grammarian: grammar is the study of a mental object, I-language, related to the individual speaker, and grammatical changes can only arise in the sense that when an individual acquires an I-language this I-language may turn out to have properties different from the I-languages of those speakers who assisted in the language acquisition process by providing a triggering experience. The differences in the I-languages manifest themselves in observable differences in the E-languages.

So languages change only *through* the individual speakers, not within them. If we take the evolution of species as a convenient comparison, we could say that languages change in the same way as a species does: every individual is different but all the individuals have a common genetic core, and every now and then mutations occur, sometimes leading to quite noticable changes in an individual, and given a spread of the mutated genes over a longer period of time we may even get a new species substantially distinct and different from the original one.

Now, I have deliberately avoided venturing into the more intricate and, at least to me, intriguing sides of studies of grammatical change within generative grammar such as the many correlations between different and at first sight unrelated grammatical phenomena. But I am sure that there will be opportunities for me to address such issues in near future, maybe even in this very auditorium in less than 24 hours. Thank you!

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