Learner Language and Language Learning

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Chapter 11:
Learning a foreign language

Earlier chapters, particularly chapters 3–7, have focussed on language, on linguistic *products*. Chapters 8–9 dealt with some *processes* involved in speech production and reception. And as these chapters show, it is no simple matter to identify and describe mental processes: we have no direct access to what goes on in the brain when people communicate. Although there is hope that the neurological mechanisms underlying speech production and reception will eventually be identified, psycholinguists are at present forced to rely heavily on indirect evidence, on inferring from observation of product-level phenomena to underlying processes.

The problems one encounters in describing language *learning* reflect the general problem of how to get at the level of mental processes when the only access to this is through the observation of individuals from the outside. But in addition, the analyst interested in the processes of language learning has to disentangle these from receptive and productive *communication* processes. This would be a simple matter if the two types of process occurred in clearly differentiated situations, what we might for the time being refer to as "communicative situations" and "learning situations". Although there are differences between situations the primary purpose of which is communicative, eg a job interview, and situations which are created to promote learning, eg English teaching Monday mornings between 8.55 and 9.40, there is a considerable overlap between "communicative situations" and "learning situations". Indeed, one might argue that the major part of native language acquisition and, frequently, a considerable part of second language acquisition, is a by-product of the individual communicating with friends, family and colleagues. Similarly it can be argued that one takes a very restricted view of communication if one rules out the possibility of educational situations also being "communicative". So rather than distinguish between "communicative" and "learning" situations, we prefer to draw a distinction between educational and non-educatio-

nal situations, both of which are communicative. Relative to foreign language learning, an EDUCATIONAL SITUATION is a communicative situation which is created in order to promote learning. In a NON-EDUCATIONAL SITUATION, communication is the predominant goal.[1]

This distinction does not help us to identify learning processes as distinct from communication processes, but it helps us to formulate the problem in a precise way. Assuming that both educational and non-educational situations are communicative, and that learning often takes place in either type of situation, we must accept that learning processes have to be described not in isolation but as interacting with receptive and productive processes of communication, and that communication and learning processes operate simultaneously, though at different levels of consciousness. If the wish to communicate is in focus, at a less conscious level there may be a process of learning taking place simultaneously. In some situations, eg in connection with certain classroom activities, the priority of the two types of process may be reversed so that learning is in focus, or there may be no communication process in any real sense of the word. However, most foreign language learning, even in the context of the classroom, probably takes place indirectly, as a by-product of communicating in the foreign language.

11.1 Input – intake

One major factor in foreign language learning is the language which learners are exposed to. The nature of this foreign language INPUT will vary with the type of situation in which the language is encountered. A Danish schoolchild learning French may well be exclusively dependent on the input that the classroom provides, simply because no French is ever heard or read outside it. By contrast, learners of German in certain parts of the country may watch German television, meet German-speaking tourists, or travel south of the border, all of which can provide communicative situations which represent a different type of input to what is experienced in the classroom. The English language impinges on Danish children in 101 ways outside school: youth culture, American clothes and food, sport, television, cinema, tourism, technology, etc. There is constant exposure to the language and indeed the cultures from which it originates. Danes

are familiarised with English sounds, with concepts and words. All these are experienced directly, without the mediation of the mother tongue, as the following imports into Danish testify: *allright, burger, cornflakes, cowboy(bukser), babysitter, pub, soft ice, world cup*, etc.

Some of the input can be interpreted directly by means of the knowledge the learner already has of the foreign language (the learner's 'interlanguage' knowledge, see chapter 17). This means that the psycholinguistic rules (cf chapter 6) which a native speaker has used in order to produce the language are matched by rules in the learner's IL system. The learner can also interpret input by means of inferencing strategies (see chapter 8), by making qualified guesses as to the meaning of input ('top-down processing'). The result may be total or partial comprehension, or there may be a residue of input which is incomprehensible.

In figure 14, (a) and (b) cover COMPREHENSIBLE INPUT, input which the learner can interpret either by means of a direct application of existing IL knowledge or by the activation of inferencing procedures. (c) covers incomprehensible input.

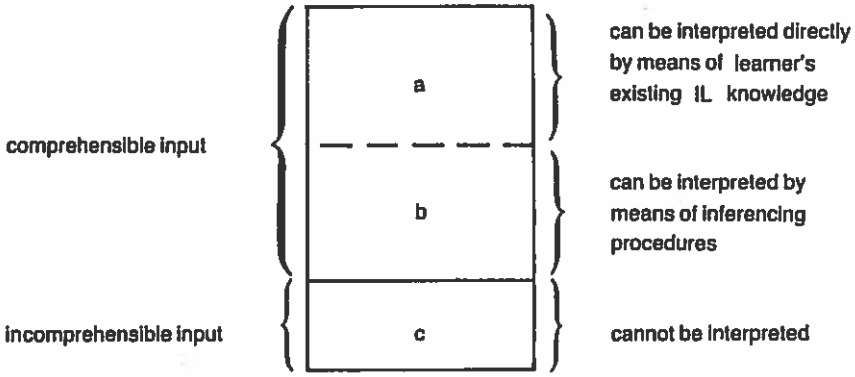


Fig. 14: Input

The concept of comprehensible input applies to processes of *communication*. We can now take a step into *learning* and say that it is a prerequisite for learning new rules, words, etc., both that input is comprehensible and that input goes beyond what can be directly interpreted by means of the learner's existing IL knowledge.[2] We have all had the experience of listening to a foreign language we do not know and which we can make no sense of whatsoever. Clearly, no new

learning takes place unless we can assign (tentative) meaning to at least parts of such input: input-based learning (see below, 11.4.2) presupposes comprehensible input. On the other hand, it is obvious that if the language the learner is exposed to contains nothing but speech acts, words, grammatical structures and intonation patterns which are familiar, it is difficult to see that the learner could learn anything new. Foreign language learning presupposes input which is made comprehensible by means of inferencing and not by the direct application of a psycholinguistic rule. To continue with our metaphor from computer science, we can refer to those parts of input which satisfy the conditions we have just specified for learning to take place as INTAKE: intake is input which affects the learner's existing knowledge of the foreign language. In figure 14, (b) refers to intake.

11.2 Processes in foreign language learning

"Comprehensible input" and "intake" are necessary preconditions for learning to take place, but they do not clarify what the learning processes themselves consist of. How much is known about these? Today there is general agreement among psycholinguists that some ways of characterising language learning processes which were popular some years ago do not explain *all* aspects of foreign language learning. A good example of this is the process of IMITATION, which occupies a central place in behaviourist psychology. According to this, a child acquiring language observes a stimulus-response sequence such as someone acknowledging receipt of something by saying "thank you", and follows suit in equivalent circumstances by imitating this linguistic activity. The imitation involves at least three stages:

(1) the individual stores in memory the 'model' utterance (in our example, the speaker's "thank you")
(2) the individual produces an 'imitated' version of this utterance
(3) the individual compares her own version with the stored model utterance.

Some types of foreign language learning emulate this process by having learners repeat samples of the target language. Imitation

figures prominently in audio-lingual teaching materials, a typical activity being language laboratory drills. For instance, in the following four-phase drill, the learner hears sentences one and three on tape, and is expected to produce sentence two on the basis of the stimulus in one and to repeat the model utterance which three represents.

Four-phase drill

1. (tape) John is angry today. Yesterday.	Stimulus
2. (learner) _____ (John was angry yesterday.)	Response
3. (tape) John was angry yesterday.	Model utterance (ie correct response)
4. (learner) _____ (John was angry yesterday.)	Repetition of model

Psycholinguists have pointed out the many limitations of imitation (see eg Clark 1975, Hatch 1983). Firstly, it is easy to find examples of language produced by children which cannot be explained in terms of imitation, because it is unlikely that adults ever produced such utterances. This is the case in utterances such as "Louise comed yesterday", in which the child generalises a regular verb ending.

Secondly, a condition for individuals to store information for more than a few seconds, in their LONG-TERM MEMORY (see Stevick 1976), is that the stored information is related to information already there. Imitation itself cannot therefore explain learning. If information is only stored in SHORT-TERM MEMORY, the part of memory which can only process a very restricted number of items at a time, then individuals could only imitate fairly short utterances and then only immediately after they have been received (as in a four-phase drill, for example).

Thirdly, an important aspect of language learning is interpretation. This can be easily seen in relation to the acquisition of deictic expressions, such as the first and second person personal pronouns or adverbs of place, which reflect the communicative role of speaker and hearer. The correct use of neither "this is my coat" nor "come here" could be learned through imitation.

For these and numerous other reasons, psycholinguists have con-

centrated on developing alternative ways of accounting for language learning, which focus more on the cognitive operations involved in the learning process. One such approach will be presented, but before leaving imitation we should point out that the fact that imitation cannot explain all aspects of language learning does not imply that there is no place for imitation in language learning. It may well be important in the learning of certain aspects of language, such as those parts which are learned unanalysed, in wholes ("Gestalts"), for instance prosody or routine formulae.

The model we present sees foreign language learning as primarily a cognitive process of *hypothesis formation* and *hypothesis testing*, supplemented by processes of *automatization* and *consciousness raising*. To illustrate what we mean by these terms, consider the following example. A Danish learner of English at an elementary level needs to refer to 'week-end' in replying to a question asked by her teacher. She hypothesises that the word *week-end* (pronounced ['vi:genɔd]), used in Danish, may also be used in English. This is the stage of hypothesis *formation*. She therefore, in reply to the teacher's question, uses the word with the Danish pronunciation. This is the stage of hypothesis *testing*. The teacher corrects the word by repeating it with the English pronunciation. The learner interprets this as confirmation of her initial hypothesis as regards the existence and usage of the word in English, but understands that it needs revision with respect to pronunciation. On future occasions, the learner attempts to imitate the teacher's pronunciation when using the word. Soon the learner is capable of retrieving and pronouncing the word without experiencing any problems in so doing, i.e. she has *automatized* her knowledge of the word *week-end*. At this stage, the learner is likely to be conscious of the fact that some words currently used in Danish are both formally and semantically equivalent with English words, in other words, the learner's *consciousness* about cognates has been *raised*.

11.3 Hypothesis formation

11.3.1 The nature of hypotheses

If we say that foreign language learning is primarily a process of hypothesis formation and testing, we need to clarify what we mean

by HYPOTHESES. Let us first emphasize that by hypotheses we do not imply something which the learner is necessarily conscious about. Hypotheses *may* be consciously formed, as could be the case when a learner guesses that *eventually*, like the Danish cognate word *eventuelt*, can be used to express possibility, which it cannot. But if we restricted 'hypotheses' to what learners were conscious about, the model would soon fail to account for other instances of foreign language learning, as there is clear evidence of learning taking place without learners being conscious about the individual steps they are taking. Let us consider an example from the PIF corpus.[3]

A learner in his second year of learning English wrote a text in which he is describing a cartoon film: a man's hand gets stuck successively to an alarm-clock, a telephone, and a coffee pot. The text contains the following occurrences of the present progressive:

the watch ringing	he's flying out
his hand sitting	he's sitting
the telephone sitting	he's singing
the can (= pot) flying	
the can going	

On the face of it, the learner masters the correct English rule (subject + BE + verb + *-ing*) in a certain number of cases, but otherwise uses a deviant, IL specific, rule. As learners at more advanced levels never leave out the auxiliary before the *-ing* form of the verb, we can assume that the learner's IL will change and that learning will proceed from the stage reflected in the data just quoted to a stage which is in accordance with correct English usage. Consequently, we can assume that the learner's IL system at the time of using the forms listed above contains a hypothetical rule for the formation of sentences containing *-ing* forms. Our guesses as to what such a hypothesis might be are:

(1) *-ing* forms following pronominal subject require an auxiliary verb whereas those following nouns do not

or

(2) *-ing* forms are used as finite verb forms, but a pronominal subject of an *-ing* form has a specific form *(he's)*.

Whether (1) or (2) is the more correct way of representing the learner's hypothetical rule is not relevant here. What we want to illustrate with the example is that it is at least likely that the learner in question is not aware of the existence of a hypothetical rule. We therefore take it that learners are often unconscious about the hypotheses they form, and that these hypotheses are not defined relative to conscious beliefs but relative to the cognitive representation of the learner's interlanguage knowledge. Hypotheses are cognitive representations of knowledge which are ready to change if confronted by evidence that they are inadequate. Those parts of an interlanguage system which contain hypothetical rules/items and which are ready to incorporate new hypotheses are said to be PERMEABLE. The opposite of permeability is FOSSILIZATION, which refers to a state where the cognitive representation is inflexible, and the relevant parts of the system are generally unwilling to incorporate new hypotheses.[4] A prerequisite for foreign language learning to take place is that the learner's cognitive representation of her interlanguage knowledge is permeable.

11.3.2 Where do learners' hypotheses come from?

One important source for hypothesis formation is input, interpreted by means of inferencing strategies which utilize the learner's L1 or other languages different from the relevant foreign language, as well as the learner's existing interlanguage knowledge. A different type of hypothesis formation is exemplified by *week-end* and *eventually*, discussed above: the learner wishes to express something she does not have the appropriate interlanguage knowledge for, and makes use of productive communication strategies. These, like the receptive procedure of inferencing, typically involve the activation of L1 (as in the two examples just mentioned), or of L2. The net result is that no matter whether the learner reaches a hypothetical rule because she has to make sense of incoming data by inferencing or because she does not have the direct linguistic means for expressing what she wants, she is likely to activate her L1 or her interlanguage knowledge. Hypothesis-formation based on L1 will be referred to as transfer, whereas the term generalization refers to hypothesis-formation based on interlanguage knowledge.

(a) Generalization

This is the process of extending existing interlanguage knowledge to new contexts. Let us consider a learner's interlanguage rules for the function of the expanded tense as reflected in text 22, chapter 18. The text contains two errors with respect to this: "high jackers are often getting ..." and "sometimes are the police trying ...". We assume that the learner has already established the rule that reference to verbal actions of limited duration is expressed by means of the expanded tense. The learner needs to refer to what is in fact verbal action of limited duration, but with the modification that the action occurs frequently or regularly. The learner, consciously or not, generalizes her existing interlanguage rule to these contexts. The result of this is that she establishes a new (hypothetical) rule, which is in fact a modification of her already existing rule. The rule happens to be erroneous relative to the target language norm, and it is likely that she will revise it at some point, either because of target language input she receives, which will not follow this rule, or because she will receive corrective feedback to her own production (her teacher might decide to put a red line against the examples just discussed).

(b) Transfer

Carrying over a form from the mother tongue or from other foreign languages into IL is referred to as TRANSFER. The role of transfer in foreign language learning is probably one of the most debated topics among researchers. Whether the L1 is regarded as a help or a hindrance in L2 learning has important implications for foreign language pedagogy.

There are two factors which are particularly important for L1-based hypothesis formation.

1. The amount of *formal and functional similarity* between the L1 and the L2, with respect to the various linguistic levels and to the different components of communicative competence (consider the differences between on the one hand Danish and English, and on the other hand Danish and Greenlandic). This factor of "objective" distance between languages is not in itself relevant for whether or not learners *will* transfer, but rather determines what the outcome of a transfer-based hypothesis will be. If there is a considerable overlap between the two languages, a greater number of transfer-

based hypotheses will be correct than if there is less overlap between the two languages.

2. Whether or not the learner is *willing to transfer*. The fact that L1 and L2 are closely related with respect to a certain feature is no guarantee that learners will transfer, just as there is no guarantee that learners abstain from transferring within areas of no overlap.

What, then, determines whether learners decide to transfer or not? First of all, the perceived distance between the L1 and L2 is undoubtedly important. Learners probably in the very early stages of foreign language learning develop an assessment of how closely the two languages are related at various linguistic levels. Second, it has been shown that there are certain areas of the L1 (eg idiomatic expressions, cf chapter 5) which learners are generally unwilling to transfer because they consider them marked or language-specific. Third, the learner's metacommunicative awareness of L1 may play an important part. Certain areas of language lend themselves more to conscious awareness than others: learners are probably more aware of words and of morpho-syntactic rules than of pragmatic and discourse phenomena or prosodic features in their L1. It is conceivable that low metacommunicative awareness promotes transfer, and that learners therefore more readily transfer pragmatic, discourse and prosodic features than lexical and morpho-syntactic rules.

11.3.3 How do learners try out their hypotheses?

Hypothesis-testing can take place in both educational and non-educational situations, and can be achieved in either of two ways: (a) by the learner scrutinizing spoken or written input for examples which can confirm or reject hypotheses in the learner's IL system; or (b) by the learner interpreting feedback to speech which she (or a different learner) has produced. We shall deal with each in turn, and concentrate on hypothesis-testing in educational situations.

(a) Input-based hypothesis testing

Both teaching materials and the language produced by the teacher and by other learners may contain instances of rules and items which a learner has formed hypotheses about. Necessary conditions for the learner to make use of such information are that the learner (1) *identifies* such occurrences; (2) *interprets* them correctly; (3) *draws the necessary conclusions*, either to give the cognitive representation of the relevant rule a less hypothetical status, in the case of positive confirmation, or to revise the hypothetical rule, in the case of partial confirmation or dis-confirmation.

In the *identification phase*, learners processing incoming speech activate existing hypothetical rules and match these against the rules underlying the input. But as comprehension may take place as a top-down process (cf chapter 8), without the recipient activating all the relevant knowledge sources, it is possible for the learner to overlook input which could help her test hypothetical rules. This provides one explanation for the well-known fact that frequently occurring rules in English such as "the 3rd person *-s*" or the rules for the function of simple and expanded tenses often do not seem to influence learners' wrong hypotheses about the rules. A learner may process and completely comprehend 100 sentences containing examples of finite present tense verb forms with *-s* and still, in her own production, leave out the *-s*. It is just conceivable that the learner, in processing these sentences, never reaches a stage where she tries to assign a function to the *-s* ending, ie that she does not in fact identify the *-s* as relevant in relation to her own hypothetical rule. What the teacher would very often do for such learners, write 5 examples on the blackboard with *-s* and 5 without, and ask the learners to identify the difference, can be characterized as "guided identification". The teacher helps the learners get through the first stage of hypothesis testing so that they can concentrate on the second and third stages, interpretation and conclusion.

In the *interpretation phase*, learners try to decide whether their existing hypothetical rules and items need revision or can be given a less hypothetical status. Here we have to accept that learners may develop their IL through a succession of erroneous hypotheses, that the revision of one hypothetical rule does not of necessity lead directly to a correct rule. The use of the simple or progressive present

tenses in English can again serve as an illustration of this. An initial hypothesis might be that the *-ing* form is used as a finite verb much like the Danish present tense. At this stage, simple present tenses would not exist. As the learner receives more varied input than "I'm V-ing so and so", she hypothesizes that *-ing* forms are used for limited activity taking place "now". This is obviously a better hypothesis than the preceding one but still not the correct foreign language hypothesis, as the learner may produce sentences like "then he is walking towards the window, then he is opening his book, and then he is writing down what the teacher is saying". This hypothesis may therefore give way to the revised hypothesis that reference to a succession of actions is expressed by simple verb forms. The important thing for the learner is of course that she goes on developing her hypotheses in the direction of the target language. And for the teacher that she does not simply see the learner as *still* making errors within one and the same area, but that she tries to analyse whether the errors the learner makes indicate a development in the right direction. One could say that the teacher also needs to interpret the input she receives from the learner in order to decide on what action to take.

If the identification and interpretation phases are responsible for which parts of the input get assimilated into the learner's IL system (what we referred to as "intake" earlier), the *conclusion phase* is concerned with the processes seen from the learner's end, with what happens to existing IL knowledge when new knowledge is introduced. We shall focus on one specific aspect of this. Revisions of a hypothetical rule are often introduced gradually, preserving traces of the old cognitive representation of the rule. One well-known fact about learners' foreign language production is that it often exhibits variability in the use of a given L2 rule. Learners make errors when they become excited, or when they write their home assignment at the breakfast table, errors which they would not make if their language production was more careful (ie in situations which allow for monitoring to take place, cf chapter 8). Cases like these demonstrate that earlier cognitive representations are preserved alongside revised versions of the same hypotheses, and that there may be an intimate relationship between different versions of one and the same rule and characteristic features of the communicative situation in

which the learner activates the rule for productive purposes. Two factors seem particularly relevant in this connection: (1) the degree of consciousness involved with respect to the rule; (2) the degree of automatization of the rule. As we return to these two issues below, let us just point out for the present that the reason why previous versions of hypothetical rules become activated in unmonitored situations is probably that they are more highly "automatized", ie that they can be activated and converted into behaviour without a great deal of mental energy. In educational situations, it is likely that learners' corrections of hypotheses are caused by the teacher's explicit feedback, which may have the consequence that the revised hypothesis is more conscious. If we assume that there are limits to how much mental energy language users can spend, it is easy to understand why easily activated rules are used in situations in which energy is concentrated on planning *what* to say rather than *how* to say it.

Before we proceed to looking in detail at how learners interpret feedback to their own productive use of the IL, mention should be made of an important type of hypothesis testing which we have not considered above, namely learners seeking information on specific points of language from authoritative sources like dictionaries, grammar books, teachers, fellow students or native speakers. This type of hypothesis testing presupposes a high degree of consciousness as well as, frequently, the existence of metacommunicative knowledge (so as to understand information presented in terms of a metalanguage like the description of a grammatical rule in a grammar book).

(b) Interpreting feedback

The following example illustrates a different way in which learners obtain information about the adequacy of their hypothetical IL rules and items:

Pupil:	from – oh – [ai'li:nz] father
Teacher:	[i'leInz]
Pupil:	[i'leInz]

The hypothesis-testing process here involves two phases:

(1) a learner produces an utterance which contains a hypothetical element (in this case, the pronunciation of the name Elaine)
(2) an interlocutor, in this case the teacher, provides feedback.

FEEDBACK can be POSITIVE, informing the learner that what she said was correct. Or it can be NEGATIVE or "corrective", pointing out that the learner's turn contained an inappropriate element and possibly informing the learner about the correct form. Negative feedback can be considered more useful to the learner than positive as it helps eliminate other possible, but erroneous hypotheses. There is, however, some evidence from experimental psychology that learners do not necessarily act according to what is most efficient from a narrow cognitive point of view (ie negative feedback), and that they prefer positive feedback.[5] The teacher's task is therefore to make sure that *both* types of feedback are provided, to take into account both cognitive and affective factors.

Whereas negative feedback is on principle possible whenever a learner's utterance contains an error, it is far more difficult for the teacher to decide when to give positive feedback. It is necessary to estimate whether the learner is trying out a hypothesis leading to correct language, and therefore *needs* confirmation. Or whether the learner is just producing "correct" language on the basis of a well-established rule and therefore does not *need* positive feedback – although it may still be welcome, and useful to other pupils, who have not yet established the rule in their IL.

In the "Elaine" example, the reason for the teacher's feedback is *linguistic:* she corrects the pronunciation of a name. Other examples of linguistic feedback are:

Pupil: she told him that Elaine was leaving and er
Teacher: yes that she had left yes
Pupil: and there was a letter to him

Pupil: it is about Benjamin's father's ['kəupænənʃip] – – companionship
Teacher: I think you would say partnership
Pupil: partnership
Teacher: yeah

The teacher also frequently provides feedback on the *content* of what the pupils say, as for example when discussing a literary text:

Pupil: Benjamin had raped her father's wife
Teacher: had he
Pupil: no but his father says
Pupil: well I I think that she got her own ideas – – she
Teacher: why do you stress think – you say I THINK that she's got her own ideas – –
Pupil: I don't know er I don't er I don't know er I just know of her what the author tells me so I can't do anything but think

In all of the examples we have quoted, the teacher provides feedback DIRECTLY, she explicitly takes up the problem in a special turn. Corrective feedback of this sort would be classified as "other-initiated", interactive repair work in discourse terms (cf chapter 4). Teachers sometimes consider it beneficial for the smooth development of talk in the classroom not to interrupt the pupils by producing feedback turns and instead delay their feedback to their own turn. This feedback may still be given directly, ie by explicitly taking up the problem, but often the feedback is provided in an INDIRECT way. One way of doing this is exemplified by the following exchange:

Pupil: in their mind I think he behave himself like that if you can say so
Teacher: yes so maybe here we have you remember that we have – eer talked about the way he breaks the rules – again and again he behaves in – a way ...

The teacher manages to incorporate a correction of the learner's error in her own turn.

Feedback can be formulated in *metacommunicative* terms, ie in terms of explicit rules. Or feedback can be given by the teacher simply providing the correct utterance, without further explanation. The example just quoted of indirect feedback is a good illustration of feedback which contains no metacommunicative information (a characteristic feature of indirect feedback in general). (See also text 13, chapter 6).

11.4 A model of foreign language learning

The following figure summarises the main points made so far about foreign language learning seen as a process of hypothesis formation and testing.

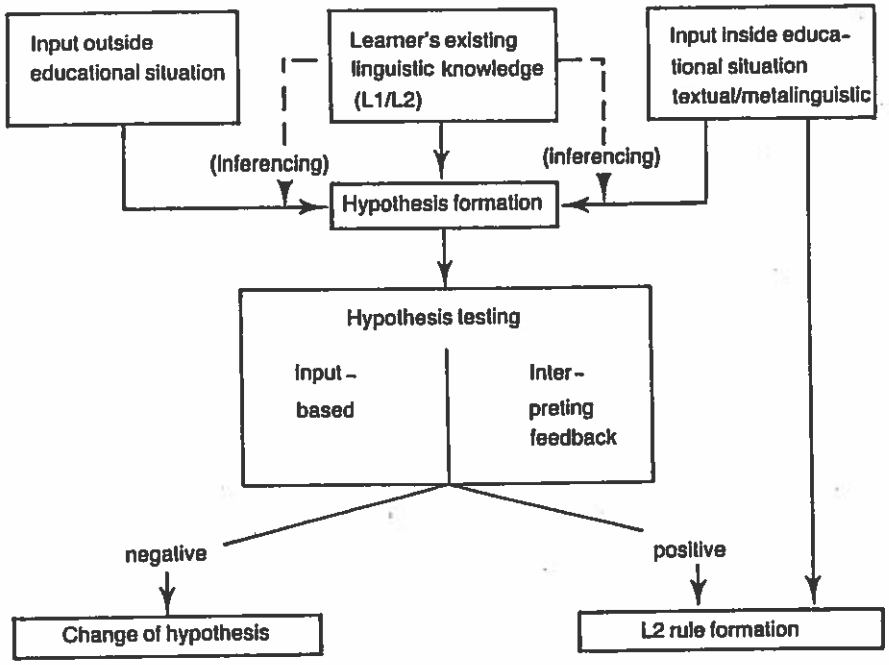


Fig. 15: Foreign language learning seen as a process of hypothesis formation and testing

In the figure we have added one process to those covered already, the one represented by the arrow that combines "Input inside educational situation" with "L2 rule formation". This is to allow for the possibility of "direct teaching". The teacher or the teaching materials introduce a new target language rule or item, eg a word, which the learners then practise. Clear-cut instances of this are to be found in connection with vocabulary teaching, where the teacher may decide to introduce words not encountered in texts (for instance words belonging to a relevant semantic field). As regards grammar, teachers generally prefer to let learners meet sentences exemplifying a grammatical rule several times in context during which learners start hypothesis formation before they formulate a rule which then makes explicit what the learners are on the way to accomplishing themselves.

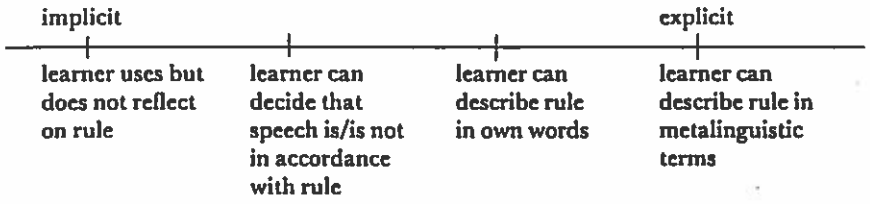
11.5 Types of knowledge, automatization and consciousness-raising

In studies on L2 learning, a distinction is often observed between EXPLICIT and IMPLICIT linguistic KNOWLEDGE. One, simplified, way of accounting for this difference is to say that implicit linguistic knowledge is what the individual can use but not describe, whereas explicit linguistic knowledge is knowledge which the individual can describe but does not necessarily use. A typical example of implicit linguistic knowledge is the pre-school child's knowledge of her L1, although one is often surprised at even very young children's ability to describe linguistic rules. Explicit knowledge in the extreme is found in cases of rote-learning, eg when somebody can rattle off a long list of prepositions in German which take the dative case, but does not know the precise meaning of half of them and has great difficulty marking the noun with the correct case. It is clear that this crude distinction between implicit and explicit knowledge does not capture all those cases of knowledge which the individual can *both* reflect on and use automatically.

Let us first take a closer look at what we have referred to as explicit linguistic knowledge. When the teacher gives the rule about prepositions in English quoted above (the 'instead of' example in chapter 6, text 13), she is trying to establish one type of explicit linguistic knowledge in the learners' heads. This is explicit knowledge formulated within a (simplified) form of the metalanguage we can refer to as English grammatical description. Such metalinguistic knowledge is an important part of foreign language learning/teaching, whereas it may be less developed with respect to individuals' L1, though this depends on school tradition in L1 teaching.

Explicit linguistic knowledge, however, need not be knowledge which individuals can formulate within a metalanguage. There are degrees of explicitness. Metalinguistic knowledge represents the highest degree of explicitness. Less explicit knowledge may be for-

mulated in everyday language ("we use *små* in Danish if we talk about more than one") or occur in situations where the individual can decide that something is *not* correct, without being able to give reasons. Rather than operate with a dichotomy between explicit and implicit knowledge, we therefore propose the following continuum as a more satisfactory way of characterising types of linguistic knowledge in terms of consciousness:



One might argue that there is no difference between the two leftmost categories, that somebody who can use a linguistic rule can also decide whether something is right or wrong. The reason why there is no such one-to-one relationship between actual language use and acceptability judgments is that awareness of linguistic norms may interfere with the individual's ability to reflect on her own verbal behaviour. It is well-known that people sometimes systematically use a linguistic rule which they would, if asked directly, categorically claim to be unacceptable and not believe that they themselves use.[6]

There are two important questions to raise in connection with a discussion of types of linguistic knowledge:

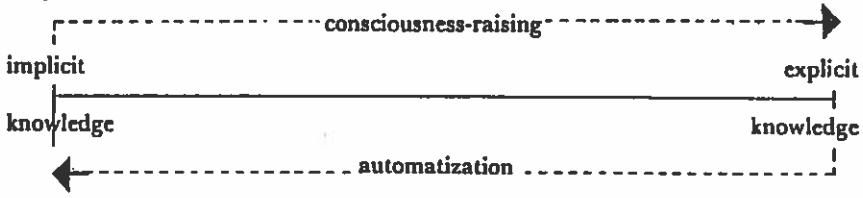
(1) How much of the continuum can a certain rule (more precisely, a psycholinguistic rule) occupy? In other words, is it possible for rules to be both maximally implicit and explicit at the same time? Or do some types of linguistic knowledge rule out the presence of other types?
(2) Supposing that learning sets in at *one* point on the continuum, what are the possibilities for the learner to extend this knowledge into other areas of the continuum?

Opinions differ considerably among researchers on these questions. One view is that implicit knowledge is of a completely different type from metalinguistic knowledge: implicit knowledge has to be 'acquired', explicit knowledge has to be 'learnt'. They may coexist,

but serve very different functions in communication: implicit linguistic knowledge is at the basis of speech reception and production, whereas explicit linguistic knowledge is used for monitoring these processes. This is the view most categorically advocated by the American researcher Stephen Krashen (see eg Krashen 1982).

A different view is that there is nothing in principle that prevents a certain rule from being represented both at the extreme implicit and at the extreme explicit ends of the continuum simultaneously: learning can proceed either from implicit knowledge to more explicit knowledge, or in the opposite direction. The process of developing more consciousness about implicit knowledge is part of the general process of CONSCIOUSNESS-RAISING. A process in the opposite direction – the learner gradually developing an ability to use a certain rule for productive and receptive purposes without being aware of this – is usually referred to as an AUTOMATIZATION process.

We can illustrate the processes of consciousness-raising and automatization, relative to foreign language learning, in the following way:



The view we have just described is held by many European researchers and is largely in accordance with Soviet psycholinguistic theory.[7] We consider both automatization and consciousness-raising important elements in a comprehensive model of foreign language learning, in addition to the processes already discussed (hypothesis formation and testing, imitation).

11.6 Foreign language learning related to classroom activities

We finish off this chapter by relating the process of foreign language learning to three classroom activities, a translation exercise, teacher-guided discussion of a literary text, and role play. These are activities which illustrate the different processes at work.

11.6.1 Teacher conducts translation exercise in the classroom

Before the lesson, the pupils (grade 10) have prepared a translation into English of ten sentences, all dealing with the problem of inversion. The teacher asks one pupil to write her translation on the chalkboard, and invites the rest of the class to comment on it. This leads into a discussion (in Danish and English) of different aspects of inversion in Danish and English, and the teacher finishes off the teaching sequence by outlining on the chalkboard the most relevant rules for inversion in English.

Which of the types of learning discussed above are likely to occur in this situation? Most of the processes seem to be represented. The pupils can form and test hypotheses, they can imitate the teacher's corrections, establish explicit (metalinguistic) knowledge. The only thing they are not likely to do is automatize their IL knowledge. From a superficial point of view this looks like a fairly good learning situation, and translation was in fact one of the cornerstones of the so-called 'grammar – translation method'. Closer inspection reveals that what the learners are likely to learn is fairly restricted. When the translation task is structured around a linguistic problem, here inversion, learners do not practise the coordination of *various* types of linguistic knowledge or pragmatic and discourse sides of communicative competence. Also important is the fact that the teaching situation *itself*, ie the interaction between the pupils and between pupils and teacher, adds very little in terms of language learning to what is the objective of the teaching sequence, learning specific linguistic rules and practising these in a given (and in this case restricted) context.

11.6.2 Teacher guides discussion of a literary text in class

The pupils (grade 1gs) have been asked to read the last chapter of Charles Webb's *The Graduate* at home, with the instruction only to check those words in the dictionary which prevent them from reconstructing the overall meaning of the text. The teacher's objective is partly to check the pupils' understanding of more difficult passages in the text, partly to complete the analysis of the book which they have been working with for the last two weeks. The teacher asks

most of the questions, sometimes directing the same question to different learners when she is dissatisfied with the reply from the pupil addressed first. The pupils occasionally interrupt each other and the teacher, partly to express lack of understanding ('repair requests'), partly to express disagreement. The pupils generally seem active and willing to contribute to the discussion.

Considering language learning relative to *this* situation, we find a dramatic change in emphasis from the first example discussed. In the text discussion, automatization is very much in focus, perhaps not so much within speech production (as it is only one of the 24 pupils who speaks at a time) as within speech reception. There is ample scope for hypothesis formation and testing and for imitation, but as the teacher tries not to repair too much and, when she does repair, to do so indirectly, there is little consciousness raising involved. However, one of the teacher's objectives for the textual analysis is to discuss characteristic features of the dialogues in *The Graduate*, and there is therefore scope for consciousness raising.

11.6.3 Pupils role-play in small groups, followed by general discussion in class of pupils' experiences in role-playing

The teacher's objective for this lesson is to teach the pupils (grade 8) ways of complaining in English and how to counter complaints by using a range of modal verbs and other modality markers (cf chapter 3). In the previous lesson a drama text had included a number of complaints, and the learners were made aware of this speech act. The class is divided into groups of four, three pupils role-playing and the fourth noting down examples of complaints and complaint rejections. After the role-playing session, the observers write their observations on the chalkboard, and the teacher joins the class to discuss the examples. In this discussion, different forms of complaints and complaint rejections are included as well as other matters, eg morphology and lexis, whenever relevant.

This situation, with its two phases (small-group interaction and clasroom interaction) incorporates all the language learning processes mentioned above: hypothesis formation and automatization in the role-play situation itself; hypothesis testing partly in the role-play situation (with other pupils), partly in the classroom situation

(pupils and teachers); consciousness raising in both the role-play situation (because of the distance created by role-playing) and in the classroom (with the possibility of building up metacommunicative awareness within the area). But it needs emphasizing that the main reason why so many learning processes are covered is that in our example the teacher does not use role-playing simply in order to create variation in teaching but, very deliberately, to reach certain teaching objectives. If role-play is not carefully planned and followed up, there is the risk that all the learners do is form hypotheses, test these against other pupils' hypotheses, and increase automatization of both correct and incorrect rules.

Footnotes to chapter 11

1. See also section 2.4 in chapter 2. Frequently used terms are *formal situation* for what we have referred to as 'educational situation', and *informal situation* for 'non-educational situation'. We avoid these terms because in everyday usage, non-educational situations are often referred to as more or less formal.
2. It is necessary to emphasize that this is a *necessary,* though not a *sufficient,* condition: as all language learners have probably experienced, it is not the case that one learns whenever one is forced to making sense of input by means of inferencing strategies. For reasons that are still badly understood, one may repeatedly be in a situation in which one is forced to infer the meaning for instance of a word, without apparently learning the word in question. Cf also the discussion in section 5.6 of what it means to know vocabulary.
3. See Færch 1979.
4. We use the term *fossilization* in a broad sense, irrespective of whether the relevant area of the IL system is or is not in accordance with a target language norm. The term is often used in a more restricted sense, to refer to those areas of the system which are incorrect and resist change. See eg Selinker 1969.
5. See McDonough 1981.
6. One consequence of this is variation in native speaker performance in different contexts, described in a series of pioneering studies by the American sociolinguist William Labov (see particularly Labov 1972).
7. See for instance Leont'iev (1971), (1974), *Osnabrücker Beiträge zur Sprachtheorie* vol. 10 (1979), *Tværsproglige Blade* 2/1 (1982).

Chapter 11. Sources and further reading

McDonough 1981 is a good, up-to-date and easily read introduction to foreign language learning, covering many more areas than we do in this and the following chapter. The book considers both behaviourist and cognitivist learning models, as does Clark 1975. Knapp-Potthoff/Knapp 1982, part I, provides a comprehensive discussion of principles of foreign language learning, with an emphasis on insights provided by IL studies. Hatch 1983 contains a wealth of information on research into second language acquisition; for the reader who wants an exhaustive and up-to-date description, the book is indispensable.

Comparisons between L1 and L2 learning are contained in all of the preceding studies. McLaughlin 1982 is useful on this topic. For imitation, see Stevick 1982.

The function of transfer in foreign language learning is discussed in some of the contributions to three anthologies: Gass/Selinker 1983, Dechert/Raupach (in press) and Kellermann/Sharwood Smith (in press).

Automatization and consciousness raising as processes in foreign language learning are treated in various publications. For different views, see Krashen 1981, 1982, Bialystok 1982, Sharwood Smith 1982. Also relevant are the Soviet studies referred to in footnote 7.

On neurolinguistics, see Ellegård 1982. For a review of the relevance of neurolinguistic research to language teaching, see a series of contributions to *TESOL Quarterly* 1982/3 and Diller 1981, part 1.