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Language competence. Theory and empiry

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Linguistic competence

Theory and empiry

Christian Lehmann

University of Erfurt

Abstract

Language competence has sometimes been used as an idealized notion which somehow embodies the collective knowledge of a speech community in the person of an ideal speaker-hearer. However, the basic notion is the competence of an individual in a language. If the language in question is not the native language, it is taken for granted that the person may be proficient in the language to some degree. The standard is then generally set by native competence. However, native competence is itself a matter of degree. Consequently, objective criteria are required by which one may assess the competence of a person in one or more languages by a common standard. This presupposes a notion of 'linguistic competence' which has empirical import. The paper tries to articulate a concept of linguistic competence which can be converted into language tests. A test was devised on this basis and administered to groups of native and non-native speakers of German. The results of the experiment suggest that there is no difference in principle between native and foreign language competence, whether on theoretical or empirical grounds.

Keywords: competence, performance, langue, parole, communicative competence, language proficiency

1. Introduction

The purpose of the present work¹ is to develop a concept of **linguistic competence** that is applicable to linguistic abilities of individuals in a uniform, objective way under a variety of conditions. To that end, the concept must be theoretically well-founded and have clear empirical correlates. An important corollary of well-foundedness is interdisciplinary fruitfulness.

¹ It arises from a seminar on "Sprachbeherrschung und Sprachbegabung" directed in tandem with Karlfried Knapp at the University of Erfurt in the 2006 summer term. I thank Karlfried and the students for helpful suggestions. Thanks also to Wolfgang U. Dressler, Paolo Ramat, Eva Hajičová and Anna Siewierska, who discussed the presentation at the 39th Annual Meeting of the SLE at Bremen, as well as to Teresa Fanego and two anonymous reviewers, without whose helpful and stimulating criticism this paper would be much worse (and shorter).

The notion of 'competence' has its basis outside linguistics. It plays an important role both in professional life and in disciplines concerned with the professional personality such as sociology, pedagogy, psychology, personnel management. A competence is a bundle of cognitively controlled abilities or skills in some particular domain. It implies both knowledge and the ability and disposition to solve problems in that domain. Relevant domains are often occupational areas; and a set of problems in such a domain is often called, for short, a job. The solution of problems presupposes the ability to make informed and responsible choices. Competence is essentially acquired through practice and experience. It is assessed according to some established standard.

In psychology, a distinction is made between personal and professional competencies. Since we are concerned with linguistic competence, we may say that from a general point of view, a person's linguistic competence is, first and foremost, part of his personality. On the other hand, it is certainly one of those personal competencies that are highly relevant to professional life. As a consequence, linguistic competence is one of the central concepts in applied linguistics,² and there it has always been construed in such a way as to be applicable to professional life.³

It is the aim of the present work to assemble the multifarious aspects of linguistic competence into a comprehensive notion. Many of the empirical issues of the paper have been addressed by applied linguistics, especially by that branch which is devoted to foreign language teaching and learning. There is, however, to this date no unified theory that would be equally applicable to competence in native and foreign languages, to monolingual and plurilingual competence. We need answers to questions such as the following:

- 1. What does a speech community consider linguistic competence?
- 2. As for the concepts of a competent speaker formed by different speech communities: where do they differ, so that the concept of linguistic competence is culture-bound; where do they overlap, so that there is a universal core to the concept?
- 3. Can the notion of linguistic competence relevant in a society be operationalized in the form of a test by which the competence of a person in some language can be assessed?
- 4. How do the various factors making up linguistic competence correlate? For instance, does lexical competence correlate with grammatical competence? Does procedural competence, as defined in § 2.3 below, correlate with reflective competence?⁴
- 5. Can a correlation between competence in one's native language and aptitude in foreign languages be ascertained empirically?⁵
- 6. Is there a unified concept of language aptitude in the sense that a person apt for languages is apt both for his native and for foreign languages?

First of all, answers to such questions have an intrinsic scientific interest. Quite in general, if the notion of competence in a language can be turned into an empirical concept, then a

⁴ Anecdotal evidence of monolingual persons who are successful linguists, and polyglots without much linguistic understanding, would lead one to doubt it.

² The Common European Framework of Reference for Languages (CEFR) is an important case in point. Levels of proficiency are defined in terms of a multiplicity of communicative criteria. What is generally missing is the operationalization of the levels in terms of tests and measures.

³ Cf. Nunn 2003 for recent problem awareness.

⁵ Evidence in favor of this assumption is produced in Vollmer 1982:187f.

number of issues become empirical issues. Take, for instance, question 4. Relevant research may have a number of results, among them importantly the following three:⁶

- a. We find a close correlation among the competencies relating to the components of the language system, while there is no correlation among competence in the language system and variational/pragmatic/communicative competencies. Then we may feel entitled to conclude that there is, after all, a competence in the language system that is separate from other cognitive and social abilities.
- b. We find, on the contrary, lack of correlation among the abilities concerning the language system, while there may be correlations between some of these and other cognitive or communicative abilities, e.g. between grammatical competence and analytic intelligence. Then we may conclude that linguistic competence is constituted as the intersection of a heterogeneous set of abilities.
- c. We find a significant correlation among all the abilities constituting linguistic competence in the wide sense. That would seem to argue that there is a unified and comprehensive linguistic competence.

Apart from their theoretical significance, the questions posed above have considerable practical import. A positive answer to question 3 would enable us to standardize language proficiency tests and thus to put the assessment of the linguistic skills of subjects – for instance of pupils – on a more objective basis. A contribution to that problem is presented in § 4. Positive answers to questions 5f would enable us to administer a predictive test to a person and to give him well-founded advice concerning his career.

Answers to some of these questions will be attempted; the rest – especially questions 1f – is left for future research. In particular, the following **theses** will be proposed:

- a. There is a unified concept of language competence, applicable to all the languages that an individual knows, i.e. to native and foreign languages alike.
- b. Language competence is similar to other human abilities in that individuals differ in the extent to which they possess it.
- c. 'Language competence' can be operationalized in the form of language tests that determine the extent to which an individual possesses it.
- d. For each individual, ability in a particular language depends on his universal linguistic ability. This is true both for his mother tongue and for other languages.
- e. Ability in one's native language and ability in foreign languages, although normally differing in extent, are objects of the same kind. I.e. there is no empirical correlate to the construct of a unique 'native speaker's competence'.

In § 2, a set of basic notions will be introduced that are presupposed by any discussion of the concept of linguistic competence. § 3 tackles the theoretical problem of linguistic competence, first by reviewing some accounts found in the literature, then by assembling the parts systematically. § 4 reports on a language test designed to measure the competence in German of groups of native and second language speakers and concludes that while there is, on average, a quantitative difference between the two groups, there is no categorical difference in principle. § 5 completes the methodological perspective by a look at the linguistic competence of linguists, and § 6 summarizes the results.

⁶ The issue and the various approaches that have been taken to it are the subject of Vollmer 1982.

2. Basic notions

In this section, a set of notions that are ingredients to any conception of competence will be introduced. Some of them may be elementary, others just require a definition in the face of existent variation. In keeping with what was said above about interdisciplinary fruitfulness, we will start with a supra-linguistic concept of competence; language will come in only in § 3.

2.1. Activity, ability, competence

A human **activity** such as pole vault, piano playing or speaking is some piece of controlled behavior. As such, it is observable, i.e. it can be a source of primary data in the sense of Lehmann 2004, § 3.3. An individual may perform a certain activity according to a certain norm – to be discussed in § 2.4 – and subject to certain conditions like autonomy which will be foregone here, and may so perform it repeatedly or regularly. To the extent that we verify this, we infer that the individual is **able** to perform the activity. We say that the ability underlies the activity, that the activity instantiates the ability. In that sense, the activity is **actual**, the ability is **virtual**. Viewed methodologically, the ability is not observable; it is abstracted from the activity.

Individuals interact with their environment on the basis of genetic disposition and learning. The environment is articulated in domains, and individuals differ in their ability to cope with different domains. An individual is **competent** in some domain iff he is able and skilled to solve problems in that domain⁷ and disposed for appropriate use of the solution (cf. White 1959:297 and Klieme et al. 2003:72).

In unfolding the notion of competence, the following features are relevant:

- a. Competence is a **potential**; it is based on the ability to manifest a certain behavior and to perform a certain activity. The behavior and the activity are real in the sense of being observable. A competence may be investigated empirically only by observing its performance. By the same token, the concept of competence is operationalized by testing the subject's solution of certain problems; cf. § 2.2.
- b. Competence is a goal-directed notion. As such, it involves a **teleonomic hierarchy**. Assessing somebody's competence in a domain therefore implies an assessment of his performance against the various levels of the hierarchy. At the highest level, the issue is only what the person wants to achieve and how well he reproducibly achieves that goal. At the lower levels of the teleonomic hierarchy, reaching a goal involves use of certain means. Here the issue is how skilled the person is in employing any of those means. Overall success in achieving a goal should be a function of the performance at the various levels.⁹

⁸ Canale & Swain (1980:6) say: "one cannot directly measure competence: only performance is observable."

⁷ Wiemann & Backlund (1980:187) speak of "effective behavior".

⁹ To give a linguistic example: Marc Antony wants the power in Rome. In order to get it, he persuades the audience that Brutus did wrong in slaying Caesar. To this end, he employs a variety of rhetorical figures. These, in turn, involve certain sentence types, and these require certain intonation curves. In order to shape these, the speaker requires some musicality. Consequently, the shape of Marc Antony's intonation curves contributes to changing the balance of power in Rome.

- c. Given that a competence involves skills evolved and put to use in interacting with a certain domain, it follows that it must be at least partly **acquired** by the individual. Thus, organisms of a certain species have an **inborn** faculty to acquire competence in a certain domain, and then they acquire it depending on a variety of circumstances.
- d. A competence may involve different **capacities** of the individual, such as perceptual, productive, cognitive and social capacities. Some kinds of competence, such as musicality or politeness, involve both perception and production. Perception involves the senses, and further differentiation may then be based on the senses. For instance, perception of music may go through the ears or through the eyes. Production may concern sheer bodily behavior, as in swimming, or it may concern mental objects, as in painting and composing music.

The notion of competence does not apply to behavior that is exclusively bodily. For instance, we may speak of an able swimmer, but not normally of a competent swimmer. Competence only relates to activities that are cognitively controlled; it involves ability and knowledge (see § 2.3). This comprises abilities that reduce to the knowledge of some domain, as for instance competence in medieval history. Importantly, it also comprises activities that combine cognitive and social aspects on the basis of some bodily behavior. Consider the case of a musician. The prerequisites for being a good pianist include the following:

- a. Physiological: hearing, dexterity, brain capacity ...
- b. Cognitive: memory, processing notes, understanding musical structure, perception and rendering of the emotional atmosphere of a piece ...
- c. Social: empathy with the composer, with the audience; empathy and cooperation with musicians of the same band ...

As will be seen in § 3.3, linguistic competence shares with musicality this multiformity in terms of the capacities involved.

2.2. Abstraction and idealization

Like any scientific concept, 'competence' involves some abstraction. Some existing concepts of competence involve idealizations, in addition. In order to evaluate such concepts, the distinction between abstraction and idealization must first be made clear. Moreover, since we strive for an empirical concept of 'competence', we must show how it can be operationalized. I therefore briefly discuss the notion of operationalization in this context.

Abstracting a concept from a base – some data or a more concrete concept – means identifying those features that are constitutive of the concept, i.e. that are taken as crucial in subsuming or not an object under the concept, while at the same time ignoring (leaving unspecified) all those properties which the objects covered possess in addition but which are immaterial to the concept in question. For instance, we abstract the concept of a table from our experience with a set of tables. That concept does not comprise the color of the table(s). This is so despite the fact that all real tables have colors. The concept does not deny this, it just leaves it open. Abstraction is essentially a step in an inductive procedure, although it may be guided (deductively) by more general principles.

A construct of thinking is an **idealization** of some concept iff it changes or omits any of the features constituting that concept in order to simplify it. In an idealization, we assume a state of affairs that does not correspond to known reality. We do so in a methodological situation where our subject matter is so hopelessly complex that we are incapable of

proposing a theory all of whose concepts are interrelated in such a way as to cover appropriately the interactions of the objects meant by them. In such a situation, we limit our epistemic interest by singling out a concept and disregarding part of its complexity. We might, e.g., construct a concept of a colorless table, i.e. a table that does not reflect light. That would be an idealization that is incompatible with our experience of tables, which teaches us that all tables have a color. Moreover, there is by definition no methodological procedure that would allow us to pass from the idealized concept to the basic concept (from a colorless table to a real table). If there were, the idealization would be unnecessary. An idealization cannot be arrived at inductively, it can only be deduced from axioms or (failing that) be stipulated. 11

A theory is an empirical theory, i.e. a theory of an object area existing independently of it, only if its concepts and theorems can be operationalized. The **operationalization** of a concept or theorem consists in specifying a set of procedures by which it is to be applied to some observable phenomena. That typically involves the specification of a test that some phenomenon must pass in order to be subsumed under the concept or, on the contrary, the specification of certain phenomena that would, if they occurred, falsify a certain theorem. Thus, operationalization of the concepts and theorems of a theory is an essential step in rendering it falsifiable and, thus, empirical.

Since an idealized theoretical construct is one that comprises features which contradict known reality, it is by definition neither falsifiable nor operationalizable. That means that one admits idealizations in the construction of a theory at the price of immunizing it against falsification, i.e. of depriving it of the status of an empirical theory. The question of whether such a theory should be pursued in a science is then, ultimately, a question of the epistemic interest of the people responsible for that scientific activity.

2.3. Cognitive levels of competence

A competence in some domain is a cognitively controlled bundle of capacities. As such, it comprises the two levels shown in Table 1.

level	competence	faculty	content	nature of actions
lower	procedural	ability	skills of habile and experienced action	automatized
higher	reflective	knowledge	recursive reflection on the lower level	controlled

Table 1. Procedural and reflective competence

 10 In this sense, Widdowson (1973:17f) speaks of an "extraction", as opposed to an abstraction.

¹¹ Lyons (1972:58f) argues for a distinction of three stages of idealization in relating utterances to sentences: regularization, standardization, decontextualization. Observe, however, that no methodology has ever been proposed to do this in an objective way. Lyons himself is frank enough not to call the relevant methodological step 'abstracting', but 'discounting' properties of the data. That is, while Lyons may have introduced some useful distinctions within idealization in linguistics, he has not demonstrated how one can relate utterances to sentences. Nor could he ever do so, since any such procedure would necessarily entail cancellation of the counterfactual assumptions underlying the idealization of a 'sentence'.

Thus, **procedural competence** or **ability** in a domain comprises a set of skills of experienced and effective action. This presupposes a certain amount of automatization of these skills. **Reflective competence** or **knowledge** (or expertise¹²) in a domain comprises the control of the concepts and mental operations necessary to reflect on that domain and on the relevant procedural competence in a broader context, including the conditions, goals and consequences of relevant actions and the choice of appropriate means. It includes the capacity to activate procedural competence from a meta-level. This is necessary in order to control the ability and to employ it responsibly.

The distinction between procedural and reflective competence is, of course, closely related to the distinction between **procedural and declarative memory** well-known from neurology. Procedural memory is subconscious, not amenable to introspection and cannot be verbalized. Its content is learned by practice. By contrast, declarative memory is conscious, amenable to introspection, can be verbalized, and its content is learnt by explanation. The two kinds of memory apparently have different neural substrates (Anderson 1976).

Having only procedural competence in a domain means being unable to control it and, consequently, to assume responsibility for its employment. Possessing only reflective competence in a domain means having some declarative knowledge available in the sense of being able to speak sensibly about it without, however, being capable of doing it oneself. A musician incapable of speaking rationally about his skill, on the one hand, and a musicologist incapable of making music, on the other, would provide examples of either type. On this background, competence is understood as a holistic concept that reduces neither to some routinized skill nor to some elicitable knowledge, but consists in a **reflected ability**.¹³

Since reflection is recursive, it can reach ever higher levels. Consequently, the difference between an expert and a layman in a certain domain is not that the expert unlike the layman has reflective competence in it. Instead, the expert has reached higher levels than the layman. In the best of cases, he has reached well-founded knowledge, i.e. *cognitio clara distincta adaequata* in the sense of § 3.1.4.

Finally, the concept of **proficiency** should be mentioned. In general, the term refers to a high degree of mastery of some learned skill. Relevant tests generally measure the degree to which a person masters a skill by having him solve problems in the field in question and having him score in terms of the number or difficulty of problems solved, often relative to the time needed. Most proficiency tests make no principled distinction between reflective and procedural competence. We will discuss this issue specifically with respect to language proficiency tests (§ 4.1).

2.4. The norm

Evaluating somebody's performance on some task presupposes a norm. For instance, if we say that Maurizio Pollini plays the piano better than Jane Doe, we have a norm of piano playing in mind that is approximated more closely by the former than by the latter. The far majority of those who have an opinion on the matter coincide in that assessment. It is based on the assumption that if the norm were codified and Maurizio Pollini's and Jane Doe's

¹² In some disciplines (e.g. pedagogy), the term 'expertise' is used synonymously with 'competence'.

¹³ A concept of competence that comprises 'a combination of knowledge and skill' is common outside linguistics, e.g. in pedagogy (cf. Wiemann & Backlund 1980:192).

performance on the piano were put to an objective test, then the former would score more highly in all relevant respects.

In the clearest cases, the extent to which somebody's behavior approximates the norm can be **measured**, which means that there is one or more scalar parameters whose values may be assigned to an instance of the behavior. In music, for instance, the measure at which a certain piece should be played can be fixed as a certain number of beats per second. In many cases, performance is simply considered the better the higher the value reached on a certain scale. That tends, for instance, to be the case for bodily activities as exercised in sports. For activities that are at least partly social in nature, the issue is more complicated. Take table manners as an example. They are a rather heterogeneous set of conventions concerning the position of body parts at the table, use of the fingers and handling of the silverware, avoidance of smacking and belching and the like. Measurement of performance is not what is at stake here, but rather the adjustment of behavior to a set of rules.

In describing a norm for some social activity or ability such as competence in a language, the following distinction must be made. There is

- the **norm** of performance as a goal that members of the society strive for without necessarily attaining it;
- the **standard** performance, which is not a goal to be attained but instead a mean value statistically determined on the basis of observed behavior.

The standard in this sense cannot replace the norm for most purposes and is presently not at stake. The norm, in its turn, cannot be determined directly. The method for ascertaining it is a complicated procedure:

- 1. Ask a random sample of members of the society the lower-level sample to point at pieces of performance that represent, or come close to, the norm, or to identify members or groups of the society that represent or set the norm.
- 2. Ask a random sample of the performers and norm-setters identified in step 1 the upper-level sample about features of the norm. In particular,
 - 2.1. have them point out, in the specimina identified in step 1, items that represent the norm particularly well, and items that fall short of being perfect, and determine the underlying rules by generalizing over these cases;
- 2.2.or to the extent these individuals have codified the norm, ask them what the rules are. Such a complicated procedure is necessary because, on the one hand, for many domains most subjects in a lower-level sample will have insufficient knowledge of the norm, and on the other, even norm-setters do not always observe the norm, as is sufficiently shown by the example of table manners. It may even prove necessary to reapply step 1 recursively to the upper-level sample because the lower-level sample may be too ignorant of the norm.¹⁴

3. Linguistic competence

The starting point for an empirical theory of linguistic competence is the capacity or set of capacities underlying the linguistic activity of the individual. We will see in a moment that

¹⁴ The mere supposition may sound elitist if language is concerned, but in other fields like medicine or translation, the distance between a thoroughly competent specialist and a layman is generally taken for granted.

this is a multi-factor notion.¹⁵ Most of general and descriptive linguistic work is not directly concerned with this notion taken holistically, but rather with various facets and abstractions of it. It is, however, just this notion of the set of capacities underlying the linguistic activity of the individual that forms the object of the present discussion. The next section presents a brief historical sketch of the relevant concepts. § 3.2 is concerned with the relativity of linguistic competence, while § 3.3 is the central part of the paper, which tries to outline a theory of linguistic competence.

3.1. Some previous accounts

In what follows, some relevant contributions from the recent history of linguistics to the problem of linguistic competence will be recalled. They do not form a coherent theory, but instead throw light on our topic from different perspectives.

3.1.1. Langue vs. parole

In structural linguistics, the topic of linguistic competence is intimately bound up with the relationship between what Saussure called *langage* vs. *langue* vs. *parole*. This trichotomy has been conceived in a variety of ways. Several authors regard *langue* (and some even *parole*) as something belonging primarily to the inter-individual rather than the individual sphere. In this interpretation, *langue* does not correspond to any ability and is therefore not directly relevant to our present concern. We will come back to this issue presently.

In Gabelentz 1901, some of the relevant concepts are yet characterized at a pretheoretical level. The relevant passages of the work are the following:

Jeder normal entwickelte Mensch, der die Zeit der Spracherlernung hinter sich hat, handhabt seine Muttersprache fehlerlos, solange sie ihm nicht durch fremde Einflüsse verdorben wird. (p. 62)¹⁶

The restriction added to the claim is explained further below, where it becomes clear that Gabelentz is referring both to foreign influence and to misguided education. He insists that exposure to adults who try to teach the child "educated" language will spoil or at least delay acquisition of his mother tongue. The main claim itself is articulated as follows:

Fehlerlos richtig meine ich aber im Sinne des Sprachforschers, der in diesem Falle nicht den Maßstab des Sprachlehrers anlegt. Mein verewigter Vater pflegte wohl scherzweise zu sagen: "Richtig spricht, wer redet, wie ihm der Schnabel gewachsen ist." (p. 62)¹⁷

Already Saussure (1916:11) says about his ,faculté du langage': "Pris dans son tout, le langage est multiforme et hétéroclite; à cheval sur plusieurs domaines, à la fois physique, physiologique et psychique, il ne se laisse classer dans aucune catégorie des faits humains, parce qu'on ne sait comment dégager son unité ... Le langage a un côté individuel et un côté social, et l'on ne peut concevoir l'un sans l'autre." ('Taken as a whole, language is multiform and weird; concerned as it is with several domains, physical, physiological and psychological at the same time, it cannot be subsumed under any category of human facts, because one does not see how to lay bare its unity... Language has an individual and a social side, and one cannot conceive one without the other.')

¹⁶ "Any normally developed person who has left behind the period of language acquisition handles his language faultlessly unless he experiences its deterioration by external influence."

The point is, obviously, that if a person who does not suffer from pathological conditions is speaking his mother tongue, whatever he says has to be taken as linguistically correct by the linguist. This is certainly an extreme claim, probably to be understood partly as a polemical reaction against certain tendencies of his time. It appears as if Gabelentz were not making a distinction between an ability and the behavior manifesting it. As a matter of fact, earlier in his book (p. 3) he does oppose the two concepts of language and speech, prefiguring thus the Saussurean distinction between 'langue' and 'parole'. And this very distinction shines through a few sentences below the above quotation, where he says:

Die richtige Handhabung der Muttersprache geschieht unbedacht, ohne daß der Redende sich von den Sprachgesetzen, die seine Rede bestimmen, Rechenschaft gibt. (p. 63)¹⁸

There is, thus, a concept of what Chomsky (1965:40) will later call "intrinsic tacit knowledge of the native speaker". Taken to the extreme, Gabelentz is claiming that reflection upon one's conditions of speaking tends to deteriorate its quality. While this view is unwonted with respect to people's mother tongue, it is familiar from more recent work on second language acquisition, as we will see in § 3.3.1.2.

In Saussure 1916, a distinction is established between 'langage', 'langue' and 'parole'. One conception takes *langage* as the union of *langue* and *parole* and distinguishes the latter two as the social and the individual side of the former:

En séparant la langue de la parole, on sépare du même coup : 1° ce qui est social de ce qui est individuel ; 2° ce qui est essentiel de ce qui est accessoire et plus ou moins accidentel. (p. 30)

Elle [la langue] est la partie sociale du langage, extérieure à l'individu, qui à lui seul ne peut ni la créer ni la modifier ; elle n'existe qu'en vertu d'une sorte de contrat passé entre les membres de la communauté. (p. 31)

From this characterization, linguistics has retained the notion of *langue* as a historical tradition of speaking bound up with a certain culture, but generally hypostatized in structural linguistics as a language system. That notion is part of all conceptions of linguistic competence and will be articulated in § 3.3.2.2.

As for the representation of that system in the individual, Saussure makes repeated attempts at precision. On the one hand, *langue* is not abstract; it is actually represented in the individual brain:

les associations ratifiées par le consentement collectif, et dont l'ensemble constitue la langue, sont des réalités qui ont leur siège dans le cerveau. (ch. III)

la langue existe dans la collectivité sous la forme d'une somme d'empreintes déposées dans chaque cerveau, à peu près comme un dictionnaire dont tous les exemplaires, identiques, seraient répartis entre les individus (p.38)¹⁹

¹⁷ "'Faultlessly correct', again, is here meant in terms of the linguist, who does not, in this case, apply the standard of the language teacher. As my late father [Hans Conon von der Gabelentz, himself a recognized linguist] used to say jokingly: 'He speaks correctly who talks plainly/according to his lights'.

¹⁸ "Correct handling of one's mother tongue happens unmindfully, the speaker not rendering account to himself of the linguistic laws determining his speech."

¹⁹ "language exists in the collective in the form of a set of imprints deposited in every brain, almost like a dictionary all of whose identical copies would be distributed among the individuals"

On the other hand, what was just said is not sufficiently precise since what is in the individual brain is not *langue* itself, but just an imperfect instantiation of it:

Si nous pouvions embrasser la somme des images verbales emmagasinées chez tous les individus, nous toucherions le lien social qui constitue la langue. C'est un trésor déposé par la pratique de la parole dans les sujets appartenant à une même communauté, un système grammatical existant virtuellement dans chaque cerveau, ou plus exactement dans les cerveaux d'un ensemble d'individus; car la langue n'est complète dans aucun, elle n'existe parfaitement que dans la masse. (CLG, 30)

Again, speech (parole) is individual and concrete:

Dans la parole ... il n'y a rien de collectif, rien de plus que la somme des cas particuliers. La parole est la somme de ce que les gens disent. (p. 38)

Thus, while the *Cours de linguistique générale* nowhere gets entirely precise on the matter, we may, on a benevolent reading, infer that individuals differ in their command of the *langue* that they share.

One of Saussure's sharpest critics, Roman Jakobson (1984, especially § II), demonstrated that Saussure is trying to distinguish *langue* and *parole* by two criteria which are in fact independent: 'social vs. individual' and 'virtual vs. actual'. However, *parole* is actually and essentially social, too.²⁰ Thus, only the latter criterion is valid, and at the same time, the distinction between *langue* and *parole* becomes clear-cut. On the other hand, the idea of *langue* being virtual requires clarification, too. Taking it in the most concrete of possible senses, it means that *langue* is an ability. This conception then becomes directly relevant to our concern here.

3.1.2. Competence vs. performance

In Aspects of the theory of syntax, Chomsky introduces a distinction between what he terms 'competence' and 'performance':

Linguistic theory is concerned primarily with an ideal speaker-listener, in a completely homogeneous speech-community, who knows its language perfectly and is unaffected by such grammatically irrelevant conditions as memory limitations, distractions, shifts of attention and interest, and errors (random or characteristic) in applying his knowledge of the language in actual performance. ... [4] To study actual linguistic performance, we must consider the interaction of a variety of factors, of which the underlying competence of the speaker-hearer is only one. ...

We thus make a fundamental distinction between *competence* (the speaker-hearer's knowledge of his language) and *performance* (the actual use of language in concrete situations). Only under the idealization set forth in the preceding paragraph is performance a direct reflection of competence. In actual fact, it obviously could not directly reflect competence. A record of natural speech will show numerous false starts, deviations from rules, changes of plan in mid-course, and so on. The problem for the linguist, as well as for the child learning the language, is to determine from the data of performance the underlying system he puts to use in actual performance. (Chomsky 1965:3f)

²⁰ Halliday (1978:38f) argues that if both *langue* and *parole* are social rather than individual-psychological notions, then there is no ground for a distinction between competence and performance.

In Language and mind, Chomsky restricts the notion of competence further as follows:

... the technical term competence refers to the ability of the idealized speaker-hearer to associate sounds and meanings strictly in accordance with the rules of the language. The grammar of a language, as a model for idealized competence, establishes a certain relation between sound and meaning ... (Chomsky 1968:116)

In later work (1980), Chomsky introduces a distinction between 'grammatical competence' and 'pragmatic competence':

For purposes of enquiry and exposition, we may proceed to distinguish 'grammatical competence' from 'pragmatic competence,' restricting the first to the knowledge of form and meaning and the second to knowledge of conditions and manner of appropriate use, in conformity with various purposes. Thus we may think of language as an instrument that can be put to use. The grammar of the language characterizes the instrument, determining intrinsic physical and semantic properties of every sentence. The grammar thus expresses grammatical competence. A system of rules and principles constituting pragmatic competence determines how the tool can effectively be put to use. (Chomsky 1980:224)

The importance of such a distinction for Chomsky's overall conception of linguistic competence is probably correctly assessed if one pays attention to the introductory hedge of this quotation and to the modals that permeate it. In more recent work, 'pragmatic competence' plays no role, and even '(grammatical) competence' is replaced by 'knowledge of language'. From Chomsky 1986:3-13, the following conception emerges: The human mind properly contains a component called the language faculty. The central component of the latter is 'knowledge of language'. This is a state of the mind/brain, a "cognitive system". Besides the language faculty, the human mind comprises "performance systems" which "access this information and put it to use" (Chomsky 2000:90). Some of the latter may be part of the language faculty, others are not. Much importance is attached (1986:12) to "distinguishing clearly between knowledge and ability to use that knowledge."

There are several problems with such a conception. They have often been pointed out in the literature, so that it suffices to comment briefly on them:

1. The notion of a 'tacit knowledge' contains a contradiction in terms.

The word 'knowledge' as it appears in the above quotations is not commonly applied to a state of the mind that a person cannot make explicit or account for. Reacting to relevant criticism, Chomsky (1980:69f) coined the neologism *cognize* to dub the kind of mental control that we have of our native language: "'cognizing' is tacit or implicit knowledge". This problem will be taken up in § 3.1.4.

2. The construct of the ideal native speaker has no empirical correlate.

An empirical science tries to model a certain domain of the world by constructing a theory whose concepts are defined in such a way that they may be operationalized. The object covered by the theory in that fashion corresponds more or less closely to some field of everyday experience that the society has an interest in understanding and controlling at a scientific level. One of the criteria that the success of an empirical science is assessed by is therefore to what extent it solves problems in that field of everyday experience, problems that it has not created itself. That presupposes a certain degree of correspondence between its constructs and some observable phenomena that matter to the social community.

As may be seen from the above quotations (cf. moreover Taylor 1988:153), Chomsky's concept of competence alias knowledge of language does not refer to any ability of an individual, but is rather based on the structural-linguistic concept of the language system which (among other things) associates sound and meaning, and projects this onto an abstract psychological or even neurological level where it is something that the ideal speaker-hearer has internalized. The concept involves the various idealizations that Chomsky mentions and can therefore not be operationalized (cf. § 2.2). It is, consequently, not a concept of an empirical theory.²¹

3. Chomskyan 'linguistic competence' is a static concept, while the linguistic competence of actual human beings is dynamic.

Native competence develops not only in first language acquisition, but actually over the entire lifespan of a person.²² This is true of monolinguals, but even more of plurilinguals, who may develop competence in another language to the detriment of what was their native language. Moreover, second language competence develops in learners, and this is a central aspect of all the activity surrounding second language learning and teaching in our society. To disregard its dynamic character simply makes the resulting notion of 'competence' useless. This is, thus, the second respect in which Chomskyan 'linguistic competence' is irrelevant to an empirical linguistics.

4. The relation of the Chomskyan notion of competence to the fundamental concept of ability is not clear.

Chomsky (1986:3-13), Canale & Swain (1980:7), Taylor (1988:149f)²³ and others insist on a distinction between the native speaker's competence and his ability to use the language. They try to define the term 'competence' in such a way that it excludes 'ability' and gets restricted to 'knowledge', more precisely, to the kind of knowledge Chomsky calls 'cognizing'. However, it has never been demonstrated that an ability is necessarily an ability to use a certain knowledge and that therefore the concept of ability presupposes the concept of knowledge. It suffices to consider the ability of singing to see the point. This is, then, the third aspect of this notion of 'competence' that deprives it of any possible empirical correlate. In arguing so vigorously for such a restricted concept of competence, the above authors say, in effect, that it is irrelevant for an empirical linguistic science.

²¹ The same is already observed in Widdowson 1973:17: Reducing linguistics to the study of *langue*/competence is "neither ontologically nor heuristically valid. It is not ontologically valid because it misses the essential nature of language as a social phenomenon; and it is not heuristically valid because it is not possible to discover a system which de Saussure calls homogeneous and Chomsky calls well-defined either within the data of *parole* or within the intuitions of a representative member of the speech community."

²² People enrich their linguistic competence during their lifetime, and they reach different degrees of it in all the relevant components and levels; cf. Coseriu 1988, ch. 3.3.9.

²³ Taylor (1988:151) emphatically postulates a distinction between 'knowledge' and 'ability to use knowledge'. Since he nowhere says what the criteria for this distinction are, one can only suspect that he must be playing with the polysemy of the word *knowledge*. If the necessary distinction between procedural and reflective competence is made (see § 2.3), then it is clear that reflective competence can and must be distinguished from the ability of using it. The same is, however, not true for procedural competence, which is actually at the heart of linguistic competence.

3.1.3. Communicative competence

In a set of publications starting with Hymes 1971 and 1972, Dell Hymes draws attention to the fact that grammatical competence as defined (theretofore) by Chomsky is insufficient for the individual to lead a useful linguistic life. The following is an oft-quoted passage:

There are rules of use without which the rules of grammar would be useless. Just as rules of syntax can control aspects of phonology, and just as rules of semantics perhaps control aspects of syntax, so rules of speech acts enter as a controlling factor for linguistic form as a whole. (Hymes 1972: 278)

Hymes postulates a communicative competence that relates "to speaking as a whole" (1971:16) and that embraces not only grammatical, but also pragmatic and sociolinguistic competence.

This conception has been particularly fruitful in language teaching. Canale & Swain 1980, § 3.2 articulate the concept of communicative competence into components as follows:

- 1) grammatical competence: language system,
- 2) sociolinguistic competence:
 - a) sociocultural rules of use: appropriateness,
 - b) rules of discourse: coherence and cohesion of groups of utterances,
- 3) strategic competence: compensatory verbal and non-verbal communication strategies. Component #3 is singled out especially with the second language learner in mind. Systematically, however, the strategies in question may be subsumed under either component #1 or #2.

3.1.4. Language competence

Coseriu 1988 puts forward a comprehensive theory of language competence (*Sprachkompetenz*).²⁴ As its subtitle indicates, it is not based on the language system, but instead on the activity of speaking (and understanding), thus sharing Hymes's perspective. Language competence is articulated at three levels:

- 1. general linguistic competence = **elocutionary knowledge**: speaking in consonance with reason and world knowledge (Coseriu 1988, ch. 4.3.2),²⁵
- 2. language-specific competence = **idiomatic knowledge**: control of units and operations of a particular language system,
- 3. discourse competence = **expressive knowledge**: use of such units and operations tuned in with the linguistic and extralinguistic context.

In assessing the nature of the knowledge possessed by someone able to speak a language, Coseriu invokes Leibniz 1684.²⁶ Leaving behind lower levels of cognition including

²⁵ Coseriu's examples are instructive: In understanding a proposition such as Goethe's *all theory is gray*, the competent hearer does not rush to a diagnosis of incongruent speaking and instead seeks a metaphorical interpretation for the expression. Similarly, the interpretation of compounds such as *coffee-mill* and *windmill* does start by construing a significatum by language-specific word-formation rules. However, understanding the designatum ('mill that grinds coffee' vs. 'mill driven by wind') involves world knowledge, which is independent of the particular language.

²⁴ Coseriu 1985 is an English summary of some of the basic distinctions.

²⁶ Leibniz, Gottfried Wilhelm 1684, "Meditationes de cognitione, veritate et ideis." *Acta Eruditorum Lipsiensium* nov. 1684, p. 537-542.

perception, Leibniz reaches distinct knowledge (cognitio clara distincta), which grasps its object by identifying its distinctive features and is, to that extent, well-founded. Within it, he distinguishes between adequate and inadequate knowledge (cognitio clara distincta adaequata vs. inadaequata). Adequate knowledge can reflect recursively on the distinctive features and justify these, too, by analyzing them to the end, while inadequate knowledge is limited to just identifying the features of its object. Building on this classification and applying it to the mastery of a language by a native speaker, Coseriu moves on to say:

Es ist klar, daß das sprachliche Wissen ein Tunkönnen ist, d.h. ein Wissen, das sich an erster Stelle im Tun, im Sprechen, manifestiert, und daß es beim Sprechen und Verstehen ein vollkommen sicheres Wissen ist, aber ein Wissen, das entweder gar nicht begründet wird oder für das höchstens erste unmittelbare Gründe angegeben werden, jedoch keine Begründungen für die Gründe selbst. ... Da die hier gemeinte unmittelbare Begründung eigentlich in jedem Fall möglich ist, wenn danach gefragt wird, so kann man das sprachliche Wissen, insbesondere die Kenntnis der Sprache, als eine *cognitio clara distincta inadaequata* einstufen. (Coseriu 1988: 210f.)²⁷

In terms of the distinction between procedural and reflective competence introduced in § 2.3, a *cognitio clara distincta inadaequata* is a purely procedural competence which is not coupled with a corresponding reflective competence. That does not, of course, exclude the possibility that somebody may attain such reflective competence/*cognitio clara distincta adaequata* without thereby losing his procedural competence. Procedural competence is, so to speak, the basis of linguistic competence.

Now as was said in § 2.3, the notions of 'procedural competence' and 'ability' are indistinguishable. Given this, the attempts reported in the preceding section of keeping language ability separate from language competence have no empirical basis. Competence in a language either comprises an ability or is not something that can be ascribed to speakers of a language and is, instead, the linguist's characterization of that ability (cf. Taylor 1988:151). The latter, however, is clearly a piece of (hopefully recursive) reflective knowledge/cognitio clara distincta adaequata which is outside the reach of most speakers and consequently not the object of a linguistic description (but instead the object of linguistic methodology). In other words: far from linguistic knowledge being the object of some ability to use it, it is the other way round: linguistic knowledge is reflection on a certain ability.

3.2. The relativity of competence

As we opt for taking 'linguistic competence' as a construct of an empirical theory, it is **relative** in several respects:

• People knowing a certain language differ in the nature and extent of their relevant competence. The parameters of variation comprise the two cognitive levels of competence in general (§ 2.3) as well as all of the components of linguistic competence in particular

²⁷ "It is clear that linguistic knowledge is a 'know to do' [savoir faire], i.e. a knowledge manifesting itself primarily in doing, in speaking, and that in speaking and understanding, it is a perfectly safe knowledge [cognitio clara], but a knowledge which is either not founded at all or for which at most primary, immediate bases can be indicated, but no bases for those immediate bases. ... Since the immediate foundation intended here is possible whenever one is asked for it, linguistic knowledge, especially the knowledge of language, may be categorized as a cognitio clara distincta inadaequata."

- that will be discussed in the following sections. Thus, linguistic competence is relative to the individual who possesses it.²⁸
- Like many other concepts such as beauty, piety and the like, the concept of linguistic competence has evaluative components and is therefore relative to the evaluator, which may, e.g., be a speech community. To this extent, the concept is culture-dependent. That means that somebody may be considered competent in a certain language to a certain extent in one community, but may be deemed to control the same language to a different extent in another community.
- Moreover, when the concept is used in an everyday fashion, it is also subjective with respect to the person whose competence is at stake. As we shall see in greater detail in § 3.3.2.1, competence in a language is inextricably interwoven with communicative competence. The latter, however, is something that develops in human interaction. In other words, a given person may be competent to different degrees depending on the communication partner he is interacting with.²⁹
- Finally, the concept of linguistic competence is trivially relative to the language in question. A person can be highly competent in one language and barely competent in another language. While we are used to comparing a person's competencies in different foreign languages, we are not used to assessing his competence in his native language, let alone to comparing the latter with his competence in some foreign language. These appear to be two incommensurable notions. A person's competence in his native language is typically taken for granted, while he may be proficient in further languages to various degrees. An empirical notion of competence will enable us to compare the competencies of a person in his native and in further languages in a detached, objective way.

²⁸ See Hymes 1971:7 and 1972:274 on 'differential competence' and Stern 1983:341-345. This is the exact opposite of what Taylor (1988:153) claims for Chomskyan competence.— It is an interesting issue to what extent a person is aware of the relativity of his language competence and can even assess his own competence in a particular language correctly. The issue is addressed in Delgado et al. 1999. The first question is answered with a clear 'yes' for both native and second languages, while the second question receives a mixed and problematic answer in that study. Subjects performed better in the self-assessment of their native competence than concerning their second-language competence. That, however, may be due to methodological flaws. For one thing, native competence is typically closer to perfection (thus, to a pole of the assessment scale), while second-language competence is somewhere halfway, so that a guess at the former has a higher probability of coming close to the truth than a guess at the latter. For another, it seems possible that the measure employed – the Woodcock-Muñoz Language Survey – suffers from a ceiling effect (i.e. it provides sufficient spread at medium levels, but does not differentiate sufficiently between highly competent speakers and instead above a certain level of competence uniformly assigns the highest value).

²⁹ To the extent that competence is a social capacity, X's competence is something that appears as a reflection of X's behavior in the eye of Y who X is interacting with (Spitzberg 1988).

³⁰ In certain schools, this is even an unquestionable credo. For instance, Montrul & Slabakova (2003:352) open their discussion by saying: "L1 acquisition is complete, whereas L2 learners reach their ultimate attainment at different points of the L2 acquisition route, and some even fossilize at intermediate stages."

3.3. Levels and components of linguistic competence

Linguistic competence is composite along the dimensions introduced in § 2. These will now be considered in order.

3.3.1. Cognitive levels of linguistic competence

Linguistic competence involves the levels of consciousness discussed in § 2.3. These may be summarized in a table of the same structure as Table 1:

level	competence	faculty	content
lower	procedural	language ability	skills of speaking and understanding
higher	reflective	language knowledge	recursive reflection on language

Table 2. Procedural and reflective linguistic competence

Thus, while procedural linguistic competence comprises the **ability** to communicate and comprehend the world by language, reflective linguistic competence comprises declarative **knowledge** about how language is organized, what role it plays in human life, as well as how and under what conditions it works. For instance, being able to speak the Bavarian dialect besides one's native variety presupposes a particular procedural competence. Knowing that it is, in fact, the Bavarian dialect and further facts about it (such as that it uses the periphrastic perfect in place of a simple past tense), presupposes some declarative knowledge. Speakers differ in their reflective linguistic knowledge just as they differ in their procedural competence. Higher-level declarative knowledge of a language is called linguistics.³¹

A related remark is necessary on the German term *linguistische Kompetenz*. German distinguishes between *sprachlich* 'related to language' and *linguistisch* 'related to linguistics'. Consequently, *sprachliche Kompetenz* is the competence related to language(s), whereas *linguistische Kompetenz* is competence in linguistics. As is sufficiently well-known, English and the Romance languages do not make such a distinction in their adjectives *linguistic/linguistique* etc. One of the consequences of the

³¹ Here a remark on the term *linguistic* is in order. In the historical period when structuralism, including generative grammar, had its heyday in linguistics, the meaning of this term tended indeed to be restricted to 'concerning the formal structure of language'. When it was therefore recognized, from the nineteen seventies on, what a restricted concept of language was behind that terminology, concepts like 'communicative' and 'pragmatic' started to be opposed to 'linguistic'. Since then, many a relevant publication (e.g. Vollmer 1982:50) takes 'linguistic' to denote some restricted set of structural phenomena corresponding more or less to 'grammatical' and, even worse, to 'concerning declarative knowledge of grammar' (cf. the discussion in Canale & Swain 1980:5). 'Communicative competence' has been established (see § 3.1.3) as an ability concerning language use in real life situations, and is not seldom opposed to some 'linguistic competence' which is of a purely academic interest to linguists. In Canale & Swain 1980, § 3, the term 'linguistic competence' is dropped altogether, and 'communicative competence' is the most comprehensive concept. This terminology must be strongly opposed because it is detrimental to the role of our discipline in interdisciplinary contexts. The reduction of linguistics to structural linguistics was an error in its history that has been corrected. The predicate 'linguistic' comprises everything that has to do with language, including (among other things) its structural, communicative and pragmatic aspects.

3.3.1.1. Language ability

3.3.1.1.1. Modes of linguistic communication

The modes of linguistic communication³² are defined by the communication channels and the directions – active, passive or both – in which the speech act participant uses them. They are summarized in Table 3. Mediation comes into play only where competence in more than one language is at stake.

channel	oral	written	
direction			
production	speaking	writing	
reception	listening	reading	
mediation	interpreting	translating	

Table 3. Modes of linguistic communication

The distinction between the four or six modes underlies many classifications of second language proficiency (or competence), e.g. ACTFL (ed.) 1983. On the one hand, they are, of course, equally applicable to native competence. On the other, however, there are both theoretical and methodological reasons for not attributing too much weight to this classification. From the theoretical point of view, the modes of communication – whether based on the criterion of the direction or on the criterion of the channel – occupy a rather low position in the conceptual hierarchy associated with 'linguistic competence':

- They are aspects only of procedural, not of reflective competence.
- They only concern the communicative, not the cognitive side of linguistic competence.
- And even for the communicative side, they are relatively peripheral to the extent that they
 are more based on the technical aspect of channel and direction than on the social nature
 of communication.

From the methodological point of view, tests of a subject's receptive competence meet with problems of validity. While production (and the productive part of mediation) may be observed and assessed directly, perception (and the perceptual part of mediation) may not. Relevant tests therefore necessarily require some response to what the subject understood. That, however, involves the productive mode. It is, therefore, difficult or impossible to lay bare the receptive aspect.

Thus, while it is certainly useful for certain practical purposes to test and assess the proficiency of a person for a particular mode of Table 3, the distinction may be less relevant in assessing the overall competence of an individual in a language. For many other purposes,

reimport of much of linguistics from English into German is the use of the adjective *linguistisch* with the meaning 'related to language(s)'. As a consequence, for quite a few German authors (e.g. Vollmer 1982:19 *et pass.*), *linguistische Kompetenz* means 'competence in language(s)'. This terminology is unfortunate because it tends to blur the distinction between procedural and reflective linguistic competence.

³² They are called 'skills' in Vollmer 1982:33 and 'language activities' in CEFR, § 2.1.3.

it may be left to the person in which mode he wishes to demonstrate his competence in a language.

3.3.1.1.2. Fluency

Somebody performs an activity the more fluently, the higher the rate of component operations performed and the more equal the rhythm in its performance. Fluency can be measured in terms of the rate of relevant units per time unit and the evenness of this rate over a longer stretch or in terms of the (low) number of hesitations. The concept of fluency by itself does not imply correctness. Since anybody may achieve higher fluency in an activity by lowering the standards of correctness, values of fluency become comparable only if the measure has been calibrated against a correctness value to be stipulated.

Fluency speaks of ease of performance, i.e. of the absence of effort. This, again, presupposes a high degree of automatization. Measuring fluency therefore means measuring an aspect of **procedural competence** (cf. Fillmore 1979). This is the systematic position of fluency in the overall classification of aspects of competence. This deserves to be pointed out because there are models of language testing, e.g. Oller 1973:187, which put 'rate and general fluency' as an item on the same dimension as the components of the language system of § 3.3.2.2 below.

On the other hand, fluency is not assignable to either universal semiotic competence or to language-specific competence (s. § 3.3.2) and instead is an aspect of both of them. That is to say, the fluency with which somebody commands a certain language generally varies for the languages he knows – and therefore fluency is an aspect of a language-specific ability. And on the other hand, this fluency is determined and limited by his universal semiotic ability, since people differ in the fluency by which they perform operations of communication and cognition, in general.

3.3.1.2. Language knowledge and its relation to language ability

Language activity is partly conscious, involving free choice in selection and combination of units, and partly subconscious, taking the form of automatized behavior. Successful linguistic activity involves a balanced combination of the two modes of processing. Too little automatization would imply hard deliberations and great effort in forming utterances; too much automatization would imply idling that fails to achieve cognitive and communicative goals. Therefore, the neural substrate of elocutionary competence (cf. § 3.3.2.1) may be equilibrium between consciousness and subconsciousness in processing language.

As explained in § 2.3, an individual may have reflective competence of something without having procedural competence of it. In linguistic matters, this is the typical case of the professional linguist who knows and can use all kinds of information about a certain language that he may be totally unable to speak, while most native speaker who do have a procedural competence in the language may lack that linguistic knowledge altogether. However, the knowledge possessed by that linguist is not what is normally meant by 'competence in a language' (let alone by 'language ability', 'proficiency in a language' or 'mastery of a language'). Instead, the core and basis of competence in a language is skill, i.e. procedural linguistic competence. It should be clear that this thesis is in sharp contrast with the concept of competence and the role given it in linguistics in

the literature reported in § 3.1.2, for which linguistic competence is not an ability and not procedural.

The relationship between language ability and language knowledge is dynamic in both directions, as becomes evident in language acquisition. In first language acquisition, the child first acquires procedural competence in his language. Depending on his intellectual capacity, his linguistic activity may be controlled to different degrees by linguistic knowledge, enabling him both to control his linguistic activity 'online' and to reflect on it 'offline'. In the latter case, reflective linguistic activity is called **metalinguistic**. Advanced levels of linguistic knowledge are generally achieved in formal education. In this development, primary procedural competence is secondarily overarched by reflective competence. The linguistic competence of people who have had no access to formal education is often confined to procedural competence. It is important to see that this entails not only lack of metalinguistic reflection; it also entails narrower limits on the operations of selection and combination that are constitutive of any language activity.³³

In guided second language acquisition (learning under teaching), it is often – though not necessarily – the other way round: The learner first acquires bits of the language system at the level of reflective competence. This, however, does not render him capable of communicating in the language. In order to achieve that, he must automatize, thus 'proceduralize' his knowledge, essentially by practice. This is where fluency comes in as treated in § 3.3.1.1.2. The linguistic competence of people who have had too little opportunity to practise the language they were taught is often confined to reflective competence.

Notions of linguistic competence that are one-sided in the dichotomy sketched here are occasionally entertained. On the one hand, one may think that reflective knowledge of a language is immaterial to the notion of competence in the language. However, a speaker who cannot reflect on his language can, for instance, not teach it, at least not in a systematic way. And on the other hand, many a language proficiency test³⁴ concentrates on testing reflective knowledge, essentially knowledge of grammar. However, a person (including a linguist) who cannot speak the language he knows everything about not only cannot solve any problem in that language, but also lacks the experience that much reflective knowledge is based on. Therefore, neither of the two individuals whose unfinished linguistic development has been sketched is fully competent in the language in question.

The prime result of this consideration is therefore twofold:

- a. A holistic notion of linguistic competence must not reduce to either language ability or to knowledge of language, but must comprise both.
- b. Any analysis of an individual's linguistic competence must distinguish systematically those two aspects.

The twofold nature of linguistic competence (just as many other competencies of the same kind) has been co-responsible for much of the terminological variation we have seen before. The terminological option of using 'competence' as the most general term follows Hymes 1971:16, Canale & Swain 1980 and others.³⁵ There is, however, an unfortunate aspect about

³³ In the field of first language teaching, e.g. in Frentz 1996, the concept relevant here is the metacognitive dimension of linguistic competence.

³⁴ for instance, those offered on the website http://www.transparent.com/index.htm

³⁵ Taylor (1988:166), in his zeal to keep the word competenceTM free of any non-Chomskyan associations, generously concedes usufruct of the term 'proficiency' to non-generativists who think they need a concept not enjoying Chomsky's blessing. It appears, instead, that the notion that he

this choice: As we shall see in more detail in § 3.3.2, there is a universal basis, largely inborn, to any linguistic competence. Polyglossy, for instance, is to some extent a gift. Inborn aspects of the language faculty would be aptly subsumed under the label 'language ability' (preferred, *inter alia*, in Bachman & Palmer 1996), but less felicitously under the label 'linguistic competence'.

3.3.2. Levels of generality in linguistic competence

Given the teleonomic premise of § 2.1, we presuppose two levels of generality in systematizing linguistic competence, the levels of universal semiotic competence and of language-specific competence. They may be compared as in Table 4.

competence level	universal semiotic	language-specific		
defined as ability to think and communicate by 1		mastery of a particular language.		
	some semiotic system	including its system		
based on	language faculty	socialization		
how possessed	mainly innate, partly acquired	acquired		
distinguishes	man from animal	speakers of different languages		

Table 4. Levels of generality in linguistic competence

It must be emphasized that while the two levels of competence can be distinguished in any human being, both are relative to the individual. That is, while there is no doubt a human faculty for language, individuals differ in it just as they differ in other genetic properties. However, since linguistic activity necessarily takes place in a specific language, no particular piece of performance can be assigned to either of these levels. Rather than classifying bits of linguistic activity or behavior, these levels differ in generality. Universal semiotic competence provides the basis for any language-specific competence.

In the methodological perspective outlined in § 2.1, the highest-level question in assessing the linguistic competence of a person concerns the quality and extent of his overall semiotic competence from a functional point of view. To determine this, we ask for the cognitive and communicative problems that he is able to solve, by whatever means. At a lower level of the teleonomic hierarchy, the question is how well the person masters a certain means, i.e. it concerns the quality and extent of his competence in a certain language, no matter whether that is his only, first, second or third language. We will come back to this methodological problem at the end of the following subsection.

3.3.2.1. Universal semiotic competence

Linguistic activity may be paraphrased as making sense by means of perceptible symbols. Universal semiotic competence therefore has a physiological and a mental side. The **physiological side** comprises gifts, skills and habits that share the properties of clarity and fluency as discussed in § 3.3.1.1.2. Mode-independent physiological equipment concerns the

prefers to reserve the term 'competence' for is superfluous so that the term remains available for what it used to mean before and continues to mean.

neural organization of the language centers in the brain, in particular the memory with its various divisions (working memory, short and long term memory).³⁶ Further subdivision proceeds best by the criterion of mode as introduced in § 3.3.1.1.1:

Production:

- Speaking with a diligent pronunciation, without any speaking defects like stuttering, lisping, mumbling, in a speed within tolerance limits, etc.
- Writing orderly and legibly etc.

Reception:

- Understanding with high auditory differentiation by attentive listening and employing perceptual strategies etc.
- Reading speedily with good comprehension etc.

The mental side of universal semiotic competence may be called (with Coseriu 1988, ch. 4.3.2) **elocutionary competence**. The mental capacities underlying elocutionary competence are cognitive and social in nature. **Cognitive competence** comprises aspects such as the following:

- reasoning: learning from experience, adaptation to one's environment, control of different cognitive domains, drawing inferences by relying on world knowledge (cf. § 3.1.4); language-reflective ('metalinguistic') competence, language-awareness;
- coherence and cohesion of thinking and of the discourse manifesting it;
- creativity, musicality.

Social competence comprises abilities such as the following:³⁸

- empathy, making contact, successful social interaction;
- control of different communicative domains, rhetoric competence: adequacy to (linguistic) context and (extralinguistic) situation;
- control of conversational maxims.

All of these capacities underlie each language-specific competence that an individual possesses³⁹ and are integrated in it. The relationship between the universal and the language-specific levels has to be considered from a theoretical and from a methodological point of view:

From the theoretical point of view, the distinction is primarily a rational or notional distinction. At the universal level, all of the above capacities are considered in total

³⁶ Daneman & Carpenter 1980 shows that reading comprehension depends on working memory capacity and that individuals differ considerably in this respect.

³⁷ The term 'communicative competence' is frequently employed for this concept, but appears slightly biased towards the social aspect of it, while neglecting its cognitive aspect. The term 'communicative language competence' used in the CEFR (e.g. § 2.1) appears to be pleonastic and therefore confusing. Some of the components here attributed to elocutionary competence are there (§ 2.1.1) subsumed under 'general competencies', others under 'pragmatic competencies'.

Where language is concerned, social competence boils down to communicative competence. The two main functions of language, cognition and communication, are distinguished at various junctures in this article. Since neither of these two functions includes the other, it is not advisable to use the term 'communicative competence' as a cover term for linguistic competence, neither at the most general conceptual level (as Hymes 1972 and his followers do) nor at the level of universal semiotic competence (as Grosjean 1989:7f does). Cf. also fn. 31.

³⁹ It seems plausible to assume that they essentially constitute what is commonly understood by language aptitude (German *Sprachbegabung*).

independence from the particular language that the individual employs in achieving the goals in question. The issue here is merely to what extent the individual is able to achieve them at all. At the language-specific level, the very same capacities reappear as shaped by language-and culture-specific conventions. At least some of them, like auditory differentiation, musicality and empathy, clearly have an extralinguistic basis. Further rational analysis may come to the conclusion that these are not integral components of universal semiotic competence but instead prerequisites for it.

To the extent that these capacities are linguistic in nature, they can only be investigated as bound up with a particular language. In a monolingual person, his entire universal linguistic competence is absorbed by one language-specific competence. In a plurilingual person, the two levels are kept apart more easily: On the one hand, there is a correlation between what he achieves in L1 and what he achieves in L2, since neither can be better than what his language faculty (and its extralinguistic bases) predispose him for. In this sense, his universal linguistic competence comprises what is common to the set of competencies in the various languages that he possesses. ⁴⁰ On the other hand, a plurilingual person typically achieves different goals in different languages. In that sense, his universal linguistic competence comprises the union set of the cognitive and communicative goals he is able to achieve in his languages.

3.3.2.2. Language-specific competence

Language-specific competence⁴¹ is articulated by three cross-cutting dimensions: a) Competence in the **language system** comprises the following components:⁴²

- phonetics, phonology: orthophony and orthography;
- grammar: morphology, syntax;
- lexicon: vocabulary, lexical relations, word formation/neology;
- discourse: language-specific norms of text structure. 43
- b) **Pragmatic** competence concerns the ability to use language in different social contexts. It would be subdivided into the various functional domains.

⁴⁰ Hulstijn & Bossers 1992, postulating a distinction between language-specific knowledge or skills and general language processing skills, argue on the basis of experimental evidence that the performance of a subject on some task in L2 correlates significantly with his performance on the same task in L1, and they ascribe this effect to "non-L2 specific factors", which are here called more boldly 'universal semiotic competence'. Similarly, one of the theses in Cook 1992 is: "The level of L2 proficiency in academic circumstances is related to the level of L1 proficiency." (p. 573)

⁴¹ The distinction between universal and language-specific competence is rarely made in the relevant applied linguistics literature (cf. Hulstijn & Bossers 1992:342). Consequently, the notion of language competence as defined and articulated in Sasaki 1996:7 corresponds rather closely to language-specific competence as conceived here. In particular, Sasaki's subdivision into 'organizational' and 'pragmatic competence' is similar to the subdivision into language-system and variational competence made here, except that several of the dimensions of variation are not accounted for there.— Certain aspects of language-specific competence are traditionally designated in German as *Sprachgefühl*.

⁴² Competence in the language system is called 'grammatical competence' in Canale & Swain, 1980:29, 'linguistic competencies' in CEFR, § 2.1.2 and 'idiomatic competence' in Coseriu 1988, ch. 4.3.3. The first of these terms is too narrow, the second too wide (cf. fn. 31), and the third only hits what is meant by relying on a wider sense of the word *idiomatic* than is current in the discipline.

⁴³ This component is called 'discourse competence' in Canale & Swain 1980.

- c) **Variational** competence concerns the different dimensions of linguistic variation.⁴⁴ It involves mastering the norm while maintaining flexibility in the varieties:
- sociolectal,
- dialectal,
- diaphasic: oral and written language, 45 styles and registers (appropriateness, euphony ...),
- diachronic: fashionable vs. current vs. obsolete linguistic properties.

The notion of the language system assumed here is expanded as compared with the corresponding notion in structural linguistics and earlier conceptions of language ability, since it includes the discourse level. As was seen in § 3.1.4, that level is singled out as 'expressive competence' and opposed to competence in the language system ('idiomatic competence') in Coseriu 1988. One of Coseriu's (1985) examples of expressive competence is the knowledge that while in English one says *good morning*, one does not say *bon matin* in French. This, however, is necessarily a proper part of the 'idiomatic' competence in these languages.

Semantics is not singled out as a separate component in this hierarchy. Grammar, lexicon and discourse each are conceived as semiotic notions, comprising a structural ("formal") side and a semantic side. Again, **pragmatics** – knowledge of how to say what to whom in which situation, i.e. the competence of speaking and understanding appropriately – is not a level or field disjoint from the other aspects of competence, but is an independent conceptual dimension structuring language-specific competence in its own way. Importantly, pragmatics brings about a subdivision into domains of language use. Such a domain is an area of the world that the speaker interacts with and creates by language. It is constituted by sets of speech situations defined in terms of those parameters that constitute a speech situation (speech act participants, task, topic, context, channel). 46 Among many other things, the entire set of speech acts which are conventional in a speech community comes in here. Consequently, one of the criteria by which the kind and extent of somebody's competence in a language may be assessed is provided precisely by the domains of language use that he controls in that language. This generates differences among the members of a speech community, but also among the languages controlled by a plurilingual individual (cf. Grosjean 1989).

The standard language – in the sense in which High German is the German standard, *lingua toscana in bocca romana* is the Italian standard, etc. – may be considered as one of the varieties. It may then be possible to assess more objectively and adequately the competence of speakers who do not control the standard variety, along the following lines: A speaker who only knows Bavarian and a speaker who only knows High German have *ceteris paribus* the same variational competence, whereas someone able to switch between these two varieties has a superior variational competence; and likewise for the other dimensions of variation.⁴⁷

⁴⁵ The distinction between the oral and written channel is made in subsection 3.3.1.1.1. It is related, but not identical with the polar concept of diaphasic variation.

⁴⁴ This component is called 'sociolinguistic competence' in Canale & Swain 1980.

⁴⁶ The theory of such cognitive-communicative domains concerns the ethnography of communication (see, e.g., Saville-Troike 1982), but also (functionally oriented) universals research.

⁴⁷ The above attempt at a systematization hides an important theoretical problem that will not be addressed here: A person who knows more than one language has so many language-specific competencies. However, a variety of a language, like a dialect or a sociolect, may have the same theoretical status as a language. Then either the variational competence of a person should be conceived as a set of competencies; or else the composite competence of a plurilingual person (as

3.3.3. Summary

Linguistic competence has been articulated along the following dimensions:

- I. Cognitive levels:
 - 1) language ability
 - a) modes of communication
 - b) fluency
 - 2) language knowledge
- II. Levels of generality and components:
 - 1) Universal semiotic competence
 - a) Physiological ability
 - b) Elocutionary competence
 - i) Cognitive competence
 - ii) Social competence
 - 2) Language-specific competence
 - a) Language system competence
 - b) Pragmatic competence
 - c) Variational competence

The two subdivisions I and II essentially cross-classify with each other. In other words, all of the levels and areas of linguistic competence distinguished in subdivision II involve both procedural and reflective competence (I.1 and I.2).

This classification has been arrived at deductively on the basis of current linguistic theories. There is then again the empirical question of what is considered a competent speaker in a speech community or by people in general. It may be expected that various subsets of the capacities and skills enumerated will be weighted differently in different speech communities. This question ought to be addressed by the procedure outlined in § 2.4. That will amount to a rather complex and laborious research project.

4. Measuring linguistic competence

The present section is devoted to operationalizing the concept of linguistic competence outlined so far in terms of a test. The next subsection discusses the methodological problems of such an operationalization. Subsections 4.2-4.4 then present the design, the administration and the results of a test that we actually implemented. The final subsection widens the horizon by comparing this kind of test with an intelligence test.

4.1. Dimensions of measurement

In terms of the distinction introduced in § 3.3.2, we might either test the universal semiotic competence of a subject or his language-specific competence. Grosjean (1989) argues that full

argued for in Grosjean 1989 and Cook 1992) should be conceived as part of his variational competence. Coseriu (1988, ch. 5) deals extensively with this problem from a theoretical point of view.

justice to the universal semiotic competence (his 'communicative competence') of a bilingual person is only done if one considers the union set of his linguistic competencies. At the same time, it is legitimate to ask about the nature of the competence that a person has in any of his non-native languages and compare this to the competence of a monolingual of the same language. This will be done in § 4.4.

In assessing somebody's proficiency in a foreign language, native competence has generally been used as an absolute standard against which the proficiency of second-language learners is to be measured. However, native speakers are proficient to different degrees, so they cannot provide an absolute standard. In reality, the competence of a native speaker has to be assessed by the same objective criteria as the competence of a non-native. These criteria must be derived from the components defining linguistic competence and enumerated in § 3.3. The value reached by a subject on a certain parameter is compared with the norm. The norm is, ideally, determined independently by the procedure outlined in § 2.4. As long as no relevant research results are available, it must be determined in the usual way, viz. by published authoritative work (grammars, dictionaries, treatises on stylistics and rhetoric etc.).

Much in linguistic competence amounts to knowledge of a set of objects, e.g. a set of sociolects, of lexical items, of constructions etc. In these cases, competence can be measured as the size of the set of relevant objects that a person knows. Otherwise, certain tasks must be solved in limited time, so that the number and difficulty of items processed per time unit is the measure. 49

Tasks to be solved in a test are deduced from the relevant criteria as just indicated, ideally by combining all of the parameters of § 3.3 systematically. For instance, competence in the lexical component of a language system is tested in all four modes – speaking, listening, writing, reading –, at the procedural and at the reflective level, and with respect to the various dimensions of variation. Administering such a test would last a couple of hours. Consequently, two things have to be done: a) devise tasks that test more than one ability at a time, b) make sure that each of the systematic aspects is represented in at least one task, although not necessarily cross-classifying with every other aspect.

⁴⁸ In the context of our pilot study, we dodged the issue by referring to the *Duden* (Drosdowski et al. 1984, 1989). Although this is a common procedure when a norm of the German language is appealed to, it is one of the points where our research needs to be put on a broader basis, in the spirit of § 2.4.

The literature on language test theory (e.g. Grotjahn 2000, § 5) makes a distinction between competence tests and performance tests. This distinction is ill-conceived. The object of a test is by definition the performance, not the competence of a subject (cf. § 2.1). At the same time, the goal of a test is always an assessment of the subject's competence. What is actually meant by the distinction mentioned are two different things: a) the distinction between procedural and reflective competence (cf. § 3.3.1); b) different degrees to which the test tasks resemble the real-life performance of the competence in question.

4.2. Test design

A pilot study was conducted at the University of Erfurt whose aim was the elaboration and trial of a test of competence in one of the subject's languages, in this case German.⁵⁰ The test comprised 31 tasks, which were set up so as to cover the different facets of competence as comprehensively as possible. Since it was just a pilot study with limited means at our disposal, it suffered from a number of shortcomings which we hope to make up for in future versions. In the present context, the consequence is that it is not worthwhile to report in detail on preparation, administration and evaluation of the test. What follows is, therefore, only an illustration, not a full account of our test.

A number of relevant parameters were insufficiently represented in the test tasks:

- Since it was just a test of German competence, mediation competence remained out of consideration.
- Physiological competence was only marginally considered, in test item 10 below.
- Tasks involving the oral mode were small in number, with oral processing of lexicon and grammar missing altogether. This is a flaw that our pilot study shares with foreign language proficiency tests as they are most commonly conducted, again mainly for practical reasons (both administration of the test and analysis of the subjects' performance is more laborious).
- Domains of language use were not considered systematically.

If current research is to be put on a more solid methodological basis, these biases will have to be eliminated.

In what follows, a subset of the 31 test items actually administered is presented for illustration; the tasks themselves are in the appendix.⁵¹ Table 5 classifies the test items by some of the parameters that structure linguistic competence.⁵² Subdivision II of § 3.3.3 provides the line headings of the table, while the first four modes of § 3.3.1.1.1 appear in the column headings. Subdivision I of § 3.3.3 provides the third dimension of Table 5, shown by shading: items testing reflective competence have a shaded background; the others concern procedural competence. Some of the test items belong to more than one category.

⁵⁰ The test was administered and evaluated by the participants of the seminar in fn. 1: Maria Gimpel, Jana-Iren Hartmann, Marion Kraushaar, Andreas Kubitza and Afet Nabiyeva. It was analyzed with statistical methods by Jennifer Ullrich.

⁵¹ 17 of the tasks are not enumerated here and are not reproduced, but only summarized in the appendix. This is done for a variety of increasingly uninteresting reasons: they doubled tasks presented here, they did not differentiate well between subjects, they involved sound recordings or colored pictures not reproducible here, they would take too much space here.

⁵² Charts of this structure have been in use at least since Harris 1969:11.

		mode	oral		writ	ten
			passive:	active:	passive:	active:
competence			listen	speak	read	write
elocutionary				1	2	3
language-	language	phonetics/-ology	<mark>4</mark> , 10		<u>5</u>	
specific	system	grammar			<mark>6</mark>	<mark>7</mark>
		lexicon			8	<mark>9</mark>
		discourse	10	11	12	13
	variation	style			14	<mark>14</mark>

Table 5. Test items of language competence test

These tasks are designed to specifically test the following abilities:

Elocutionary competence:

- (1) Oral formulation of a coherent text.
- (2) Drawing of inferences from reading a text.
- (3) Understanding the pragmatics of a communication situation and acting appropriately in pragmatic terms.

Language-specific competence:

- (4) Hearing knowledge of the native phoneme inventory.
- (5) Knowledge of native phonotactic patterns.
- (6) Identification of deviations from the grammatical norm in written texts.
- (7) Active knowledge of inflection patterns.
- (8) Passive lexical knowledge.
- (9) Active lexical knowledge.
- (10) Understanding text under bad phonetic conditions.⁵³ This involves many different skills at once, among them auditory skills, knowledge of collocations and inferencing.
- (11) Appropriate use of suprasegmental features belongs both to elocutionary competence and to language-specific phonetic and discourse competence.
- (12) Text understanding under conditions of low redundancy, i.e. the exploitation of the linguistic context and of world knowledge in understanding.⁵⁴
- (13) Formulation of a coherent argumentative written text. The number of arguments and the use of appropriate connectives are evaluated.
- (14) Recognition and active control of stylistic variation in the lexicon.

Since most of the tasks are solved by writing, there were no separate tasks of orthography, and instead the orthography observed in the solution to the test tasks at hand were examined. Similarly, the texts produced by subjects were also scanned for grammatical mistakes.

⁵³ Auditory understanding despite background noise was used as a test, i.a., in Oller & Streiff 1975.

⁵⁴ This is a cloze test of the kind that has been used in language testing since Oller 1973.

Some of the above tasks will be familiar from intelligence tests or language proficiency tests;⁵⁵ others are novel. The overall innovation here is to define the whole set on a systematic basis.

4.3. Test administration

20 native speakers and 20 non-native speakers of German participated as test subjects. All 40 were residents of the city of Erfurt, Germany. Data for the native speakers are as follows: They were between 20 and 35 years of age, most of them students of Erfurt universities, seven of them male. 56 All of them knew at least one foreign language, mostly English. Working on the test took the women 56 min, the men 68 min at an average. The non-native speakers were between 21 and 30 years old, all of them students of Erfurt universities, five of them male. They were native speakers of 13 different languages and had been in Germany for 1-15 years. Average test duration was 90 min.

It goes without saying that a higher number of subjects will be necessary to validate the test and to verify the results. Among the findings resulting from this pilot study, some are nevertheless statistically significant. These will briefly be discussed here.

4.4. Test results

The first thing to be noted in the statistic evaluation of the results is a significant correlation among almost all of the test items (most at 0.01 level, the rest but one at the 0.05 level). That simply means that these tasks measure essentially the same thing. This does not, of course, render a factor analysis superfluous, which shows that some of the tasks are functionally more similar than others.⁵⁷

Table 6 summarizes the percentages of tasks solved by the subjects in the entire test.

acquisition	native	non-native
achievement		
lowest in sample	60	39
highest in sample	83	72
average	74	55

Table 6. Mean percentage of tasks solved

⁵⁵ Test items similar to some of the above may be found, *inter alia*, in Acker 2001.

One of the German subjects was legasthenic and indeed scored low on most of the items. This once more underlines the necessity of devising a linguistic competence test that values oral competence (at least) as highly as writing competence, and casts doubt on the validity of a test of linguistic competence all of whose test items are presented in writing. Cf. also Vollmer 1982:49 and Grotjahn 2000, § 9.

⁵⁷ Thus, at this level of generality, there is no reason to worry about such questions as "what the cloze test exactly measures" (Vollmer 1982:54). The correlation among the results of the different tests is sufficient reason to take them as empirically valid for the construct from which they were, albeit informally, deduced.

Thus, for the native speakers, average performance on the test was at 74%, in the sense that a total of 100% items were theoretically solvable, of which subjects solved 74% at an average. Again, the average performance for non-native speakers was at 55%. The two subjects with a score of 39% had been speaking German for two years, while the person who scored 72% had been speaking German for 13 years.

In the native speaker sample, four subjects, or 20%, had lower scores than the best non-native speaker. And again, in the non-native speaker sample, 8 subjects, or 40%, had better scores than the weakest native speaker. There is, thus, considerable overlap between the two groups. ⁵⁸

Although this is only a limited pilot study, there are some significant results:

- The native speaker sample showed a normal distribution around the average.⁵⁹
- In the non-native speaker sample, there is a significant correlation between duration of exposition to the language and degree of competence, and consequently no normal distribution.
- There are enormous differences of native language competence in the sample and, one may extrapolate, in a population. ⁶⁰
- Although foreign language speakers expectably show lower scores than natives at an
 average, good second language speakers reach levels of competence that are clearly
 superior to the levels reached by bad native speakers, while there is also a sizable portion
 of native speakers who do not score better than good non-native speakers.

acquisition	native	foreign
component		
phonetics / phonology	61	34
lexicon	63	37
discourse	67	55
grammar	84	56
orthography	97	95
total competence	74	55

Table 7. Native and foreign competence in constitutive components

⁵⁸ In the experiment reported in Birdsong 1992, overlap between the deviances of the native and non-native groups is even larger. Similarly, Montrul & Slabakova (2003:382), in an experiment concerning mastery of the Spanish perfective-imperfective contrast, find no difference between native and nearnative (i.e. flawless second-language) speakers.

⁵⁹ There was a noticeable difference between the sexes: the average for male speakers was 69%, for female speakers, it was 80%. Given the relatively small size of the sample, no conclusions may be based on it. It does, however, correspond to known results of intelligence tests, where female subjects generally score higher in verbal cognition, while male subjects score higher in spatial cognition.

⁶⁰ The same is not so remarkable for non-native speakers. Trivially, a normally-gifted person may have a competence of 0% in a foreign language, while competence in his native language will be closer to 100%.

Table 7 presents the average percentages that each of the two groups of subjects attained in each of the five components in which the test items were sorted.⁶¹ A number of observations may be made here:

In either of the two columns, performance in the five components considered differs considerably. At this point of our investigation, nothing can be made of these differences. They are just a consequence of the degree of difficulty of the tasks that we designed. Moreover, as already mentioned, the number of orthographic and grammatical mistakes made per number of written words in the test was taken into account; and that yielded better results for all of the subjects than their performance on the test questions themselves. This explains the almost perfect scores in orthography and is co-responsible for the relatively high scores in grammar. Thus, it must not be concluded from Table 7 that, e.g., discourse competence (of an individual or a group) is principally better than phonetic/phonological competence.

While the competence profile over the five components is, thus, an artifact of our specific test items, one thing remains remarkable: In relative terms, the profile is the same for native and for non-native speakers. Now that is an effect that is not explicable by our specific test items and must be considered significant. It means, essentially, that the internal structure of competence in one's native language is like the internal structure of one's competence in a foreign language. 62

These results lend support to the hypotheses

- that there is unified concept of linguistic competence, applicable to native and non-native speakers alike (cf. Stern 1983:346),
- and that consequently competence in one's first and one's further languages may be reliably assessed by the same kind of test.

On the basis of this investigation, there is no reason why a linguistic theory should attribute special status to the notion of 'competence of the native speaker' (as opposed to non-native competence), let alone consider it as its goal to model that notion.

4.5. The language competence quotient

In cognitive psychology, intelligence has been defined as a certain capacity of the mind, and the intelligence quotient (IQ) has been defined as a measure of the degree to which a person possesses that capacity. On the basis of the observed normal distribution of the behavior measured by an intelligence test, a default value of 100 is stipulated to reflect the mean test score for all members of an age group. An IQ of more than 100 then represents an intelligence above the average, and conversely for a value below 100.

Most intelligence tests include and rely on linguistic competence, some exclude it. In intelligence tests with a more or less strong linguistic test component, the instructions, too, are

⁶¹ Item 14 of Table 5 was subsumed under lexicon; and the component 'orthography' of Table 7 was added as explained before.

⁶² There are, to be sure, typical differences between native and non-native competence, verified in research that heeds other distinctions. For instance, Delgado et al. 1999 find their subjects to be better at the oral mode in their native language, while they may be better at the written mode in a second language. Cf., however, § 3.3.1.1.1.

given verbally.⁶³ For instance, the HAWIE-R (Tewes 1991) consists of a verbal part, comprising six tests, and a practical part, comprising five tests. The verbal part is called such because its tasks are to be solved verbally. At least one of these, however, is specifically linguistic in nature, viz. a vocabulary test. And it is just this one test, among the whole set of eleven, which correlates most highly with the overall intelligence quotient.

This alone is sufficient evidence for the assumption that a **Language Competence Quotient** (LQ) can be defined much like the IQ has been defined. In our pilot study, average performance on the test by native speakers was at 74,4%. Setting the average LQ of 100 at that value, the LQs of our native speakers were between 80 and 112.⁶⁴ These are values familiar from intelligence tests, which may be taken to indicate that the general approach is on the right track.

In the literature devoted to analyzing the facets of linguistic competence/proficiency, there is widespread, although not unanimous⁶⁵ consensus that intelligence in general is not disjoint from linguistic competence. This issue has both empirical and theoretical interest. The empirical problem is to what extent linguistic capabilities like those investigated in our pilot study correlate, in individuals, with non-linguistic capabilities such as those tested, e.g., in the practical part of the HAWIE-R or in completely language-free intelligence tests like the TONI-3 (Brown et al. 1997). The theoretical issue is whether our ("occidental") concept of intelligence necessarily includes linguistic aspects. And if it does, is all of linguistic competence an aspect of general intelligence, or only certain components of it, for instance only reflective linguistic competence?

5. The linguistic competence of linguists

From antiquity up to modern times, a grammarian was somebody who controlled the grammar of his language, which enabled him to serve as a model for people who strove for standard performance, and to teach others grammar. Underlying the grammar was a norm, and the norm was self-perpetuating in that the grammarian acquired its mastery and then represented it for further generations. There was an understanding in the society about who represented the norm. This rendered a justification of the norm unnecessary; the norm derived its validity from its existence.

⁶³ Some very simple intelligence tests, e.g. the online test offered on http://www.iqtest.com/ (16.08.2006), concentrate on just two facets of intelligence: linguistic and mathematical abilities. As for linguistic abilities, focus is often on universal semiotic competence as manifested in the understanding of concepts, and on reading competence as manifested, e.g., in the manipulation of letters. For instance, subjects are required to identify the odd man out in a lexical field or to spell words backwards. Two objections must be raised here:

a) To the extent that linguistic tasks are selected arbitrarily from among the system of abilities and skills constituting linguistic competence, the intelligence test is ill-founded.

b) The extent to which linguistic competence is interdependent with intelligence is an open (theoretical and empirical) issue. To the extent that they are independent (so that linguistic competence can be factored out of intelligence), mathematical competence provides a very narrow concept of intelligence indeed

⁶⁴ Again, women scored significantly higher than men, with an average of 107 as against 93.

⁶⁵ "foreign language proficiency is largely independent of the learner's general intelligence" (Vollmer 1982:187).

Linguists have inherited this status and self-appraisal of the traditional grammarian. The linguist embodies the competence of the speech community. He is the living "ideal speaker-hearer". Therefore, when data of the language, including sentences and grammaticality judgements, are called for, he needs not do any empirical research, but can rely on introspection. This picture of the linguist is still wide-spread both inside the discipline and in the general public.

If instead of indulging in idealizations, one takes an unbiased look at empirical reality, one realizes that linguists command their native language (or any other language, for that matter) to different degrees just like any other member of their speech community. The extent to which a linguist knows a language is amenable to empirical test just like the linguistic competence of any other language user. It would be an interesting piece of research to compare the average linguistic competence of a sample of linguists with the average linguistic competence of their population; the results will doubtless be revealing. They may contribute to dispelling, once for all, the myth of the linguist as the incarnation of the ideal native speaker. And they may contribute to bringing linguistics closer to the status of an empirical science.

6. Conclusion

The approach of this paper was both theoretical and empirical. In the first part, a conception of linguistic competence was articulated which renders both the formulation of falsifiable hypotheses concerning various aspects of this notion possible and may be operationalized in the form of language proficiency tests. In the second part, such a test was demonstrated. Its results confirm some of the central theses of the paper, which are summarized here:

- 1. Linguistic competence is an important notion of any theory of language, but one with an empirical basis. That implies that any idealizations must be dropped, and instead linguistic competence must be taken as something that is subject to variation, just as most other linguistic phenomena. In particular:
 - 1.1.Members of a speech community differ in their linguistic competence. Similarly, whole speech communities may differ in it (cf. Everett 2005). Such issues have been treated almost as taboo in linguistics; instead, they are open empirical questions.
 - 1.2. A given individual may be competent in different languages to different degrees. Competence in one's native language and competence in foreign languages do not differ in essence, but usually just in degree. They are comprised by the same general concept of linguistic competence.
 - 1.3. An adequate notion of linguistic competence embodies linguistic proficiency as it has been approached in applied linguistics over more than half a century now, provided the latter is suitably refined and put on a solid theoretical basis.
- 2. The notion of linguistic competence has to be articulated in terms of levels, domains, components, dimensions, modes etc. Competence in the sense of mastery of the grammar of a language is only part of the linguistic competence of a person.

⁶⁶ Some examples of imperfect linguistic competence of linguists are given in Coseriu 1988:198-200.

- 3. Empirical research turns up enormous differences in the linguistic competence of members of a speech community, corresponding both in kind and in extent to differences observed in the administration of intelligence tests to larger populations.
- 4. Empirical research in linguistic competence will turn up correlations among certain parts or facets of it. The issues of a separate language faculty, of modularity of linguistic competence and such like may thus be approached by empirical research.

Finally, it should be noted that a theoretically well-founded notion of linguistic competence is the prerequisite for a sound notion of **linguistic aptitude**. Both of these notions are instrumental in the assessment of individuals' abilities and prospects that are actually performed in our societies. Linguistic science there has a responsibility to the society.

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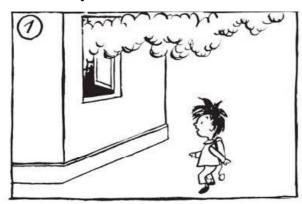
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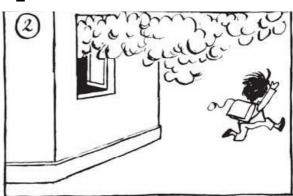
Appendix

Pilot study test tasks

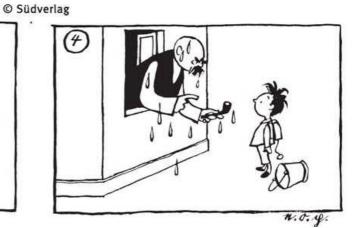
The following is a sample of the test items administered in the Erfurt pilot study. The object language is German. For use in the present publication, the formulation of the task has been translated into English.

1. Look carefully at the following cartoon for 10 seconds! Then give the leaf back and tell the story in a coherent oral text! You have got $\underline{1}$ minute for it.





3



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2. First read the text and then decide whether the statements below are true or false, by marking the check boxes.

Carpendale	junior	gewinnt	Tanzshow
------------	--------	---------	----------

Das letzte Wort hatten die Zuschauer. Im Finale der Tanzshow "Let's dance" hievten sie Wayne Carpendale und seine Partnerin Isabel Edvardsson auf den Siegerthrongegen den Wunsch der Jury.

Köln - Die Jury hatte die Schauspielerin Wolke Hegenbarth und ihren Partner Oliver Seefeldt einstimmig auf Platz eins gesehen. "Es ist einfach unglaublich. Dass ich den Titel hole, hätte ich nie zu träumen gewagt", erklärte Carpendale nach seinem Sieg. Seine Freundin Yvonne Catterfield und sein Vater Howard Carpendale unterstützten ihn von den Zuschauerrängen aus.

Die 25-jährige Wolke Hegenbarth nahm die Niederlage sportlich: "Natürlich hätte auch ich gerne den Titel geholt, aber die Zuschauer haben anders entschieden, und das akzeptiere ich." Vier Mal mussten die beiden Tanzpaare in der letzten Sendung der Staffel gegeneinander antreten. Dann gab zunächst die Jury, in der auch Eisprinzessin Katharina Witt vertreten war, ihr Urteil ab. Anschließend konnten die Zuschauer abstimmen.

Aussage	Wahr	Falsch
Die Jury wählte Carpendale junior und dessen Partnerin auf Platz 1.		
Wayne hatte fest mit dem Sieg gerechnet.		
Katharina Witt entschied für Wolke Hegenbarth und deren Partner.		
Carpendale senior verfolgte die Show vor dem Fernsehapparat.		

3. Complete the dialogue, writing one sentence per line!

Am Reklamationsschalter

Verkäufer:	Guten Tag.	
Kunde:	Guten Tag. Ich möchte gern diese Hose umtauschen.	
Verkäufer:		?
Kunde:	Sie passt mir nicht richtig, sie ist zu eng.	
Verkäufer:		?
Kunde:	Nein, den habe ich verloren.	
Verkäufer:	Dann kann ich die Hose leider nicht zurücknehmen.	
Kunde:	Aber mir wurde gesagt, dass	
Verkäufer:	Normalerweise geht das auch, aber nur mit Kassenbon.	
Kunde:		?
Verkäufer:	Gar nichts, da sind mir die Hände gebunden	

4. Each of the words now being played to you contains at least one sound that does not occur in German. Underline the corresponding letters, paying attention to foreign sounds, not to foreign orthography!

Baseball
Chanson
Journal
Notebook
Steak
Thriller
Timbre

5. Among the following invented words, underline those that could be German words!

Kest, kmeulen, Runft, Zaule, Tscheit, Pfinnig, Strampf, branken, plenn, schlöcht, Tblissi

- 6. Read the sentences, underline the grammatical mistakes they contain and correct these in the spirit of the author and with minimal changes!
- a) Die ständig waltenden Gesetze oder Faktoren der Selektion ergeben sich durch die Fortpflanzung und der damit verbundenen Vererbung.
- b) Wenn Du das Gesicht dieser Hochschule mitgestalten willst, dann bewerbe dich bis zum 13. Mai!
- c) Die Verarbeitung solcher sprachlichen Strukturen sind einfacher zu bewältigen.
- d) Insofern sind sie sich also den Verwendungsregeln von Sprache größtenteils bewusst.
- e) Dank dieses Automaten lassen sich endlos Milchschaum für Cappuccino oder Latte Macchiato herstellen.
- f) Niemand außer du gibt mir Kraft genug, das alles durchzustehen.

7. Supply the missing verb forms in the following sets!

Example: sprechen – ich sprach = sehen – ich sah

- a) sprechen du sprachst bergen du wir sagten fechten b) sagen sprechen es hat gesprochen = gelten c) es ihr hattet gesagt d) sagen abbiegen – sagen sag! treten e) sie spreche f) sprechen = geben sie
- g) sprechen ihr sprächet = genesen ihr

Wim:

0.444								
		ne following words	mea	n? Underline th	ie co	rrect answer!		
Example:		Datöubun gamittal	b)	Daitartruppa	۵)	Anotholio	4)	Catraida
Droge	a)	<u>Betäubungsmittel</u>	U)	Reitertruppe	C)	Apotheke	u)	Getreide
Croissan	t a)	Koch	b)	Frühstück	c)	Krankheit	d)	Gebäckstück
Spindel	a)	Spirale	b)	Winde	c)	Kreisel	d)	Spinnwerkzeug
Bluff	a)	Kissen	b)	Irreführung	c)	Kartenspiel	d)	Textilien
Drechsle	r a)	Schreiner				Dreher		Werkbank
Pendant	a)	Lehrer	b)	Angelegenheit	c)	Medikament	d)	Gegenstück
9. Contin	ue tl	he word pairs analo	ogica	ally with existen	nt G	erman words!		
Metzger	:	Fleischer						
Etage	:	Stockwerk						
Samstag	:							
Fahrstuhl	:							
senkrecht	:							
Orange	:							
Bücherei	:							
Telefon	:							
Computer	: :							
bevor	:							
		reasingly high-noise ne last sentence of e			e pla	ayed to you. I	Liste	n carefully and
1								
'								
11. Read	out	the text on white ba	ackg	ground!				
			G	oethe und Schil	ler			
Wum:	Win	n, ich will mit dir sp	ieler	n!				
Wim:	Aber gewiss doch, mein Kleiner. Was wollen wir denn spielen?							
Wum:	Frag mich was frag mich was!							
Wim:		fragen hmmm						
Wum:		Schweres!						
Wim:	Also	gut! Es ist klein, zi	emli	ich frech und hat	lang	ge schwarze O	hren	•••
Wum:	Äh.	Äh Goethe und Schiller!						

Aber Wum, es kann doch immer nur einer sein!

Wum:

Ach so, dann Schiller!

Wim:	Warum?
Wum:	Weil wenn man fragt, wer das war – dann war das immer Schiller!
Wim:	Aber Schiller hatte doch keine langen schwarzen Ohren!
Wum:	Ich habe ja auch erst gesagt: Goethe!
12. Fill in	the gaps in the following text!
Zur Präs	entation sei ne Films "Volver" bra Regisseur Pedro
Almodóv	ar vie Frauen mit – z Freude der Fotogr Doch auch d
	waren zufrieden. Es si die Fra, die in Cannes die mei
Bli	auf sich z Die Schönh im Abendkleid a d
rot	Teppich we tausendfach fotograf, die kurv Möchtegern-
Sterncher	n a Strand lass si willig begaff
13. Read	the text and then discuss the following issue in written form:
	In your opinion, did the policemen act correctly or incorrectly?
You hav	e got 4 minutes.
Polizei Straßensp Sauerlan	pril 2005 raste ein Mann mit einem gestohlenen Laster durch Südthüringen. Die versuchte vergeblich den Mann bei seiner Amokfahrt zu stoppen. Um eine perre zu errichten, forderte die Polizei einen 55-jährigen LKW-Fahrer aus dem dauf, seinen Laster quer auf die Fahrbahn zu stellen. Als der Mann aus dem LKW wurde er von dem Amokfahrer erfasst und überrollt. Der 55-jährige kam dabei ums
14. In th	e following sentences, replace the stylistically deviant word by a neutral Highword!
a) Erna is	et schon wieder trächtig.
b) Ernas	Köter bellt immer, wenn sie das Haus verlässt.
c) Erwin	empfing von Erna eine Ohrfeige.
	grarökonom mistet den Schweinestall aus.

In addition to the test items presented above, the test contained the following tasks:

- In listening to records of sentences, identify the one sound not pronounced according to the norm. (two items)
- Construct words from a set of morphemes.
- Given four letters, construct grammatical and sensible four-word sentences such that the words begin with these letters, maintaining the sequence of the letters.
- Given a four letter abbreviation, invent noun phrases abbreviated by it.
- From four simple sentences given, construct a sensible complex sentence.
- Supply more examples to a sequence of words of a lexical field.
- Supply more examples to a sequence of words of a derivational family.
- In the sentences given, insert the correct subordinating conjunction into the gap. (two items)
- Couple the word given with its opposite.
- Define the meaning of the verb *verdächtigen* ('suspect').
- Define the meaning of *Schloss* (castle; lock), describing its function.
- Put the nouns presented into the plural.
- From the sentence given, generate all grammatical transforms by permutation.
- You are presented with pictures of a speech situation and an utterance of one of the interlocutors. Specify the reaction he expects from the other.
- Presented with an example of unsuccessful communication, identify the problem.
- Specify a synonym for each of the idiomatic phrases presented.
- Presented with a set of sentences, order them so that they form a sensible text.