

# **Some Cognitive Theories of Language Learning and their implications for L2 Instruction**

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# SUMMARY

The purpose of this study is to evaluate the four most influential cognitive theories of language learning, namely, Interlanguage Theory, theories based on explicit-implicit L2 knowledge distinction, Variability Theories, and the Multidimensional Model.

The claims made by these theories are identified, the research on which the claims are based is evaluated, and the influences of the claims on L2 teaching are discussed.

The evaluation shows that these theories reflect widely diverging positions regarding which phenomena are in need of explanation and how this explanation can best be provided, and that this makes the cognitive theories so complex and inaccessible that they become difficult to understand. The evaluation also shows that these theories have a great influence on L2 instruction. By analyzing and discussing the claims and the empirical foundations of the theories, the purpose is to bring the divergence between the theories to the awareness of the second language practitioner and researcher.

The evaluation also leads to a number of observations being made concerning the main arguments of the theories. With regard to Interlanguage Theory, the study notes that cognitive strategies of L2 learning are regarded as central to L2 learning and that, although the learner's L1 is an important determinant of L2 acquisition, it is not the only determinant and may not be the most important. The study also observes that fossilisation is a major cause of failure by most L2 learners to achieve full communicative competence similar to that of native speakers.

Another important observation is that learners follow broadly similar routes of acquisition, although minor differences can also occur as a result of the learner's L1 and other factors, and that errors are the external manifestation of the

hypothesis-testing process, which is responsible for the continual revision of the interlanguage system.

With regard to the theories based on explicit-implicit L2 knowledge distinction, the study notes that L2 learners are assumed to possess dual competence, and that the controversy over whether or not the two knowledge types interact has not yet been resolved. From the perspective of the variability theories, L2 learners possess multiple rather than dual competence.

The claims of the Multidimensional Model link up with the 'natural route' as proposed by Interlanguage Theory or Krashen's (1982) 'Natural Order Hypothesis', and predicts that L2 structures that are developmentally constrained will not be acquired unless the learner has acquired the prerequisite structures, and that some L2 structures will not be constrained by stages of development and will thus be teachable.

The study concludes that although L2 acquisition research does not prescribe methods of teaching, it gives explanatory support to formal interventions.

The study recommends that if researchers could look into possible ways of resolving the debates concerning explicit-implicit L2 knowledge distinction, this could lead to a coherent approach to language teaching. The study also recommends that more information is needed on developmental features and how to identify features that are variational. For features where specific orders have been established, it would make sense for syllabus construction to present the grammatical structures according to their natural order of acquisition.

# OPSOMMING

Hierdie ondersoek het ten doel om die vier mees invloedryke kognitiewe teorieë oor taalverwerwing, naamlik die intertaalteorie, teorieë gebaseer op die eksplisiet-implisiete onderskeiding van tweedetaal (T2) kennis, veranderlikheidsteorieë, asook die multidimensionele model onder die loep te neem.

Beweringe wat deur hierdie teorieë gemaak word, word geïdentifiseer, die navorsing waarop hierdie beweringe gebaseer is, word geëvalueer, en die invloede van hierdie beweringe op T2-onderrig word bespreek.

Die resultate van hierdie ondersoek wys daarop dat hierdie teorieë wyd uiteenlopend is rondom die keuse van die verskynsels wat verduidelik moet word, hoe hierdie verskynsels effektief verklaar kan word en die gevolglike wanbegrip t.o.v. die kognitiewe teorieë omdat hulle so ingewikkeld en ontoeganklik aangebied word. Die resultate verwys ook na dié teorieë se geweldige invloed op T2-onderrig. Die doel van hierdie studie is om die tweedetaalpraktisyn en navorser, deur middel van 'n analise en bespreking van stellings en empiriese grondslae, bewus te maak van die uiteenlopendheid van hierdie teorieë.

Die resultate lei ook tot 'n aantal waarnemings oor die hoofargumente van hierdie teorieë. Ten opsigte van die intertaalteorie, wys die ondersoek daarop dat die kognitiewe strategieë van T2-onderrig as kern van T2-onderrig beskou word, alhoewel die leerder se moedertaal (T1) 'n belangrike invloed by T2-verwerwing is. Dit is egter nie die enigste bepaler nie en hoef ook nie as die belangrikste beskou te word nie. Hierdie ondersoek maak ook die waarneming dat fossilisasie 'n hooforsaak is van die onsuksesvolheid van T2-leerders om die verworwe taal effektief soos die moedertaalsprekers te besig.

'n Ander belangrike waarneming is dat leerders grotendeels dieselfde manier gebruik om 'n taal te verwerf, alhoewel daar kleiner verskille bestaan vanweë die leerder se T1 en ander faktore. Hierdie foute is verteenwoordigend van die eksterne manifestasie van die

hipotese-toetsproses wat verantwoordelik is van die konstante hersiening van die intertaalsisteem.

Met verwysing na die teorieë wat gebaseer is op die ekplisiet-implisiete onderskeiding van T2-kennis, toon hierdie ondersoek dat daar aanvaar word dat T2-leerders 'n dualistiese tweetalighedsvermoë beskik en dat die polemieë oor interaksie tussen dié twee tipes kennis nog nie uitgeklaar is nie. Die veranderlikheidsteorieë dui aan dat die T2 leerder 'n meervoudige eerder as 'n dualistiese taalvermoë besit.

Die beweringe van die multidimensionele model is in verband te bring met die 'natuurlike volgorde' soos voorgestel deur die intertaalteorie of Krashen (1982) se 'Natuurlike Volgorde Hipotese'. Dit voorspel dat die T2-strukture wat 'n vroeë ontwikkelingsvlak het nie verwerf sal word tensy die leerder die vereiste strukture verwerf het nie, en dat sommige T2-strukture nie afhanklik is van die ontwikkelingsvlakke nie en gevolglik onderrig kan word.

Hierdie ondersoek kom tot die slotsom dat alhoewel navorsing oor T2-verwerwing nie metodes voorskryf nie, dit wel verklarings gee van formele intervensies.

Hierdie ondersoek stel voor dat indien navorsers oplossings vir die debat betreffende die ekplisiet-implisiete teorie kan vind dit kan aanleiding gee tot 'n koherente benadering tot taalonderwys. Hierdie ondersoek stel ook voor dat meer inligting oor ontwikkelingskenmerke ingesamel moet word en toon aan hoe om uiteenlopende kenmerke te onderskei. Vir kenmerke waarvoor 'n vaste patroon bestaan, sal dit sinvol wees om 'n sillabus op te stel om die grammatiese strukture aan te bied ten opsigte van hul natuurlike volgorde van verwerwing.

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# CHAPTER 1

## INTRODUCTION

### 1.1 DEFINITION OF THE PROBLEM

Cognitive theorists are agreed that a relationship of some kind or the other exists between cognition and second language (L2) learning. They see language acquisition as a mental process involving the use of strategies to explain how the L2 knowledge system is developed and used in communication. In other words, linguistic knowledge is no different from other types of knowledge, as the strategies responsible for its development are related to and involved in other kinds of learning (McLaughlin, 1987 & Bialystok, 1990).

The cognitive perspective contrasts with a linguistic theory of L2 acquisition. The latter, Ellis (1994:350) notes, treats linguistic knowledge as unique and separate from other knowledge systems, and language acquisition as guided by mechanisms that are, in part, specifically linguistic in nature. Nonetheless, this contrast is not the issue here as the sole focus is on the cognitive theory.

The issue is that various cognitive theories and models have been proposed. These theories reflect widely diverging positions regarding which phenomena are in need of explanation, and how this explanation can best be provided. This divergence often makes the cognitive theory such a complex, inaccessible "jigsaw puzzle" that it becomes difficult to understand clearly the interaction between language and cognition. As O'Malley and Charon (1990:1) suggest, we need to address this interaction between language and cognition in order that L2 learning may be better understood.

The challenge, therefore, is to examine the claims made by the four most influential

cognitive theories, evaluate the research on which the claims are based, and suggest ways in which these claims influence L2 teaching. Three questions are addressed in the study:

- ◆ What are the major claims of these cognitive theories ?
- ◆ On what research evidence are they based ?
- ◆ What are the implications of these claims for L2 teaching ?

## **1.2 THE PURPOSE OF THE STUDY**

The aims of the study are to

- ◆ identify the major claims of the four cognitive theories.
- ◆ evaluate the research on which the claims are based.
- ◆ discuss the implications of the theories for L2 teaching.

## **1.3 METHOD OF RESEARCH**

The purpose of this study will be achieved through an extensive and detailed survey of relevant literature.

## **1.4 PROGRAMME OF STUDY**

Chapter 2 considers the origin, the emergence and continual discovery of Interlanguage Theory. Early interlanguage studies as well as later developments are examined with regard to the claims made and the research on which the claims are based.

Chapter 3 examines the theories based on implicit-explicit knowledge distinctions. Krashen's and Bialystok's theories are primarily concerned with the nature of the relationship between the implicit and explicit knowledge and how these are used in L2

production. However, Krashen and Bialystok adopt different and conflicting perspectives regarding the relationship between explicit and implicit L2 knowledge. The research on which the perspectives are based is discussed.

Chapter 4 focuses on Variability Theories of L2 learning. These theories perceive interlanguage development as varying systematically along a continuum of styles. The Capability Continuum Paradigm and the Variable Competence Model are discussed. Both adopt a multiple competence view rather than a dual competence view of L2 knowledge as the theories discussed in Chapter 2 do.

Chapter 5 discusses the Multidimensional Model. The model claims that some language features are developmentally constrained and others are variational and free from developmental constraints. The empirical foundations of these claims are discussed.

Chapter 6 considers the potential for applying second language acquisition research findings to classroom teaching. The contributions made by the theories to language learning and teaching are discussed.

The final chapter, Conclusion and Recommendations for Further Study, highlights what has been achieved and what still needs to be done.

# CHAPTER 2

## INTERLANGUAGE THEORY

### 2.1 INTRODUCTION

Interlanguage theory is primarily concerned with implicit second language (L2) development and the phenomena that contribute to the development. It is one of the oldest theories of second-language acquisition. Selinker (1992:1) argues that even though the term 'interlanguage' was introduced only in the early seventies, "in some important sense for a very long time hints of the notion interlanguage have been in many of the writings about learning a second language, albeit buried and unnamed". The founding texts, as Selinker refers to these early writings, will be briefly considered to give an overview of how second language learning was viewed and how these views relate to current interlanguage concerns. To do so, the dominant role of the first language in second language learning within a behaviourist learning theory and Contrastive Analysis Hypothesis (CAH), and the minimised or denied role of L1 in L2 learning within the context of Universal Grammar (UG) will be briefly reviewed. The emergence and the continual discovery of interlanguage theory will be dealt with and the theory will then be evaluated.

### 2.2 THE ROLE OF THE FIRST LANGUAGE

It is popularly believed that second language acquisition is strongly influenced by the learner's first language, and that the role of the first language in second language acquisition is a negative one. The first language gets in the way or interferes with the learning of the second language, such that features of the first language are transferred into the second language. In fact, the process of second language acquisition has often been characterised as that of overcoming the effects of first language. Yet, second language acquisition

research reveals considerable disagreement about how pervasive the first language is in L2 acquisition. On the one hand, the popular belief is given support, and on the other hand the popular belief is rejected and the role of the L1, if not denied totally, is at least minimised (see Ellis, 1985a:19).

The reasons for the disparity regarding the role of the first language can be understood better if the evolution of the notion of interference is examined. This involves briefly tracing its origins in behaviourist learning theory and Contrastive Analysis and how these fell out of favour. The minimalist position, which minimised or denied the role of L1 in L2, is then considered.

### **2.2.1 Behaviourist Learning Theory**

Behaviourism was a dominant school in psychology which informed most discussions of language learning. Ellis (1985a:20) identifies two key notions in these discussions: habits and errors.

With regard to habits, behaviourist psychology explains behaviour by observing the responses that take place when particular stimuli are present. Different stimuli produce different responses from a learner. These responses can be haphazard (i.e. unpredictable) or they can be regular. The association of a particular response with a particular stimulus constitutes a habit and it is this type of regular behaviour that psychologists investigate. They want to know how habits are formed.

Behaviourist psychologists attribute two important characteristics to habits. First is that they are observable. The existence of internal mental processes is dismissed as superstition and magic. Second is that habits are automatic. That is, they are performed spontaneously without awareness and are difficult to eradicate unless the stimuli upon which they are built become extinct. The learning of a habit occurs through imitation and reinforcement.

Theories of habit-formation were regarded as theories of learning in general, and were applied to language learning. In L1 acquisition, children were said to master their mother tongue by imitating utterances produced by adults and having their efforts at using language either rewarded or corrected. In this way children were supposed to build up a knowledge of the patterns of habits that constituted the language they were trying to learn. It was also believed that L2 acquisition could proceed in a similar way (Ellis, 1985a:19).

In addition to offering a general picture of L2 acquisition as habit formation, habit-formation theory also explains why the L2 learner makes errors. According to behaviourist learning theory, old habits get in the way of learning new habits. In L2 acquisition, therefore, the first language interferes with the smooth acquisition of the second language. This is called proactive inhibition. However, not all habits of the L1 inhibit the learning of L2 habits. The theory predicts that when habits are the same in both languages, transfer will be positive and no errors will occur. But if first and second language habits are different, there will be proactive inhibition which will result in negative transfer. In this case errors will occur.

Thus similarities between first and second language facilitate rapid and easy learning, while the differences between the first and second language create learning difficulty which results in errors (see Ellis, 1994:300).

In behaviourist accounts of L2 acquisition, errors were considered undesirable. They were regarded as evidence of non-learning, of the failure to overcome proactive inhibition. Errors were, therefore, to be avoided. To this end attempts were made to predict when they would occur. A procedure known as contrastive analysis was used. By comparing the learner's native language with the target language, differences could be identified and used to predict areas of potential error. In this way, teaching could be directed on the problem areas to help the learner overcome the negative effects of L1 transfer. These claims are known as Contrastive Analysis Hypothesis (CAH).

The behaviourist views have now been discredited. As McLaughlin (1987:66) states, contrastive analysis, based on linguistic comparisons of languages, both overpredicted and underpredicted the difficulties of second-language learners. It overpredicted because it identified difficulties that in fact did not arise, and it underpredicted because learners made errors that could not be explained on the basis of transfer between languages. Instead, learners from different backgrounds seemed to go through similar developmental processes in second-language acquisition.

These conclusions came mainly from studies of language contact situations and the conduct of empirical studies designed to test the CAH (popularly referred to as morpheme studies). The research denied, or at least minimised, the role of L1 in L2 acquisition and it is the subject of the next section.

### **2.2.2 The Minimalist Position**

The term, minimalist, is used by Ellis (1994:310) to refer to those theorists and researchers who sought to play down the importance of the L1 and to emphasise the contribution of universal processes of language learning, such as hypothesis-testing. It found expression in three ways: the dismissal of evidence of the pervasiveness of interference which came from studies of language contact situations, the conduct of empirical studies designed to test the CAH, and the development of alternative theoretical arguments.

The work of Weinreich and Haugen (see Selinker, 1992) in bilingual contact situations showed that many of the linguistic distortions observed in the speech of bilinguals corresponded to differences in the languages involved. The CAH relied for supportive evidence on this work because there were hardly any empirical studies of transfer in L2 learning. Minimalists like Dulay and Burt (1973) dismissed the evidence of transfer effects in bilinguals as irrelevant to L2 acquisition.

Furthermore, a number of studies of learner language carried out in the late 1960's and early 1970's indicated that the influence of L1 was much less than that claimed by the CAH.

These studies (known as Morpheme Studies) were based on attempts to quantify the number of transfer errors. The research was based on the notions of Universal Grammar which claims that children follow a common sequence when learning first language. Dulay and Burt (1973; 1974 b, c, d) reported that second-language learners, regardless of their first language, followed a similar developmental sequence. They also reported that cross-sectional analysis of learners' errors revealed that the majority of errors that children make reflect the influence of the target second language more than the influence of the child's first language.

In retrospect, there can be little doubt that some scholars were too ready to reject transfer as a major factor in L2 acquisition. This over-reaction was caused by the close connection between the ideas of transfer and behaviourism, which had become discredited. Selinker (1992:3) warns of the pitfalls of the infamous 'baby and bathwater syndrome', where, because of defects, a whole body of literature can be thrown out.

To summarise, this section has shown how theorists and researchers of L2 acquisition, under the influence of different schools of thought, have held differing and even contradictory views about L2 learning. Some emphasise L1 interference and others attach more importance to the influence of universal language processing. The emerging interlanguage paradigm, however, suggested that both groups were misguided.

### **2.3 THE EMERGENCE AND CONTINUAL DISCOVERY OF INTERLANGUAGE THEORY**

The influence of mentalists like Chomsky, who emphasised learner internal factors as the only contributors to acquisition, influenced the emergence of an interlanguage paradigm. The paradigm was considered in a number of interlanguage studies in the 1970's (Nemser, 1971; Selinker, 1972; Adjemian, 1976; Tarone, 1979) which sought to examine the nature of L2 development.

The studies laid the foundation for further developments in interlanguage theory. In this section, early interlanguage theory, with emphasis on three major paradigms, is considered. More recent developments in interlanguage theory will also be discussed.

### **2.3.1 Early Interlanguage Studies**

The term 'interlanguage' was coined by Selinker (1972) to refer to the interim grammars constructed by second language learners on their way to the target language. The term won favour over similar constructs, such as Nemser's (1971) 'approximative system' and Corder's (1967) 'transitional competence'. Selinker (1992:224) opposes what he calls a "common view" that the two terms are synonyms for interlanguage. He argues that the three terms represent three different theoretical approaches to the nature of SLA, each of which makes significantly different claims and predictions about interlanguage.

First, Selinker (1992:225) argues that a strong form of the transitional competence hypothesis would claim that learner languages are always transitional in nature. He rejects this strong claim as it ignores the reality of entirely fossilised competences, as well as the reality of early fossilisation in some socio-political situations. In contrast, the interlanguage hypothesis, while not denying the transitional nature of some subsystems of learner language, claims that even from day one of exposure to target language data, stabilisation and fossilisation of L1 sub-systems are possible and common.

Second, Nemser's (1971) approximative system hypothesis makes two important assumptions. Assumption (a) is that the learner's language is directional in that it evolves in stages which closer and closer approximate the norm of the target language. Assumption (b) is that these stages are necessarily discrete. Selinker's (1992:225) contention is that in considering these assumptions, the empirical literature, as he reads it, does not suggest that learners of a L2 'closer and closer approximate' the target language. In fact, evidence points to the contrary: "fossilisation names the real phenomenon of the permanent non-learning of TL structures, of the cessation of interlanguage learning far from expected TL

norms". So, although both Corder and Nemser make explicit statements about the possibility of fossilisation, their theoretical approaches do not seem to accommodate the reality of the phenomenon.

Generally speaking, the term interlanguage means two things. The first one is the learner's system at a single point in time and the second is the range of interlocking systems that characterises the development of learners over time (see McLaughlin, 1987:60). The interlanguage is thought to be distinct from both the learner's first language and from the target language. It evolves over time as learners employ various internal strategies to make sense of the input and to control their own output. Three major interlanguage paradigms, namely Selinker's (1972), Adjemian's (1976), and Tarone's (1979), are distinguishable.

### *2.3.1.1 Interlanguage and Learning Strategies*

Selinker (1972) argued that the interlanguage, which he saw to be a separate linguistic system resulting from the learner's attempted production of the target language norm, was the product of five central cognitive processes involved in second-language learning:

- ◆ Language transfer: some items, rules, and sub-systems of the interlanguage may result from transfer from the first language.
- ◆ Transfer of training: some elements of the interlanguage may result from specific features of the training process used to teach the second language.

Strategies of second-language learning: some elements of the interlanguage may result from a specific approach to the material to be learned.

Strategies of second-language communication: some elements of the interlanguage may result from specific ways people learn to communicate with native speakers of the target language.

- ◆ Over-generalisation of the target language linguistic material: some elements of the interlanguage may be the product of over-generalisation of the rules and semantic features of the target language.

Furthermore, the development of interlanguage was seen by Selinker as different from the process of first language development because of the likelihood of fossilisation in the second language. Fossilisation is defined as the state of affairs that exists when the learner ceases to elaborate the interlanguage in some respect, no matter how long there is exposure, new data, or new teaching. Selinker maintained that such fossilisation results especially from language transfer, but may also be the result of other processes. For example, strategies of communication may dictate to some individuals that they stop learning the language once they have learned enough to communicate. Because fossilisation does not occur in first-language development, the acquisition of the interlanguage is thought to be different from the acquisition of a first language (McLaughlin, 1987).

Although the interlanguage hypothesis was applied principally to adult second-language performance, Selinker, Swain and Dumas (1975) extended the notion to child second-language performance as well. They argued that under certain circumstances when the second language was acquired after the first language and when it occurs in the absence of native-speaking peers of the target language, an interlanguage will develop in the speech of children. These conditions were realised in the subjects studied - seven-year old children in a French immersion programme in an English-language elementary school in Canada.

Selinker, Swain and Dumas (1975:141) argued that an analysis of the children's speech revealed a definite systematicity in the interlanguage. This systematicity was not seen to be predictable by grammatical rules but to be evidenced by recognisable strategies. By strategy was meant a cognitive activity at the conscious or unconscious level that involved the processing of second-language data in an attempt to express meaning. They focused on three such strategies: language transfer, over-generalisation of target language rules, and simplification.

For Selinker (1972), therefore, interlanguage referred to an interim grammar that is a single system composed of rules that have been developed via different cognitive strategies such as transfer, over-generalisation, simplification and the correct understanding of the target

language. At any given time, the interlanguage grammar is some combination of these types of rules. In his latest book, *Rediscovering Interlanguage*, Selinker (1992:210) argues that it is his view that phenomena such as avoidance strategies, learning and communication strategies, fossilisation and backsliding, overproduction of elements, additional attention paid to the target language and the transfer or application of typological organisation must all be related to a basic learner strategy - the contrastive one of setting up interlingual identifications.

### **2.3.1.2      *Interlanguage as Rule-governed Behaviour***

In contrast to Selinker's cognitive emphasis, Adjemian (1976) argues that the systematicity of the interlanguage should be analysed linguistically as rule-governed behaviour. In this view, the internal organisation of the interlanguage can be idealised linguistically, just like any natural language. Like any language system, interlanguage grammars are seen to obey universal linguistic constraints and evidence internal consistency.

Whereas Selinker's use of interlanguage stressed the structurally intermediate nature of the learner's system between the first and target language, Adjemian (1976) focused on the dynamic character of interlanguage systems; the permeability. Interlanguage systems are thought to be by their nature incomplete and in a state of flux. In this view, the individual's first language system is relatively stable, but the interlanguage is not. The structure of the interlanguage may be 'invaded' by the first language: when placed in a situation that cannot be avoided, the second language may use rules or items from the first language. Similarly, the learner may stretch, distort, or over-generalise a rule from the target language in an effort to produce the intended meaning. Both processes Adjemian saw to reflect the basic permeability of the interlanguage.

### **2.3.1.3      *Interlanguage as a Set of Styles***

A third approach to the interlanguage notion has been taken by Tarone (1979), who

maintained that interlanguage could be seen as analysable into a set of styles that are dependent on the context of use. Tarone (1979:182) cited research literature indicating that learner utterances are systematically variable in at least two ways:

- (i) linguistic context may have a variable effect on the learner's use of related phonological and syntactic structures, and
- (ii) the task used for the elicitation of data from learners may have a variable effect on the learners' production of related phonological and syntactic structures. Tarone maintained that the evidence shows that interlanguage speech production varies systematically with context and elicitation task.

To account for this finding, Tarone proposed a capability continuum which will be discussed in chapter four as one of the variability models of L2 acquisition.

To summarise, it can be stated that the views of interlanguage that guided early research saw second language learners as possessing a set of rules or intermediate grammars. Two of these formulations (Selinker and Adjemian) stressed the influence of first language on the emerging interlanguage. These authors differed, however, in that Selinker hypothesised that interlanguages are the product of different psychological mechanisms than native languages and hence are not natural languages (though they may evolve into natural languages for some learners). Adjemian and Tarone viewed interlanguages as operating on the same principles as natural languages, but Tarone differed from Adjemian in that she stressed the notion of variability in use and the pragmatic constraints that determine how language is used in context.

What is also noteworthy about the early interlanguage studies is that, rather than focusing on the first or the target language, researchers working in the interlanguage framework began to develop data-analytic procedures that would yield information about the dynamic qualities of language change that made the interlanguage a unique system, both similar to

and different from the first and target languages. McLaughlin (1987:69) regards such approaches as representing a reaction to the 'product' orientation of the morpheme studies and error analysis, and the feeling that a more 'process' oriented approach was needed. This process orientation became more pronounced as Interlanguage theory developed in the late 1970's and 1980's. These developments are explored in the next section.

### **2.3.2 Developments in Interlanguage Theory**

Interest in more dynamic, process-oriented accounts of the interlanguage was the result of concern with several major issues facing interlanguage theory:

- ◆ How systematic and how variable is interlanguage ?
- ◆ How are interlanguages acquired ?
- ◆ What is the role of the first language ?

A discussion of these issues is important because it provides the context for developments in Interlanguage theory.

#### **2.3.2.1 *Systematicity and variability***

As researchers began to direct their attention to the developmental process, one of their main concerns was how one could account for both systematicity and variability in the development of the interlanguage. To this end, systematic and non-systematic variability have been proposed. The notion of systematicity and variability will be discussed in chapter 4 (under the heading of variability theories).

#### **2.3.2.2 *The acquisition of the interlanguage***

Process-oriented researchers have focused attention on how interlanguage develops. Rather than appealing to vaguely defined universal linguistic processes that guide

acquisition, researchers working within the interlanguage framework began to look at how learners map form-function relationships, how learners acquire functions without having acquired form, and what the roles of discourse and conversation are in interlanguage development.

Ellis (1982) argues that second language acquisition involves the sorting out of form-function relationships. The assumption is that the learner begins with forms. This non-systematic approach is considered in chapter 4. Another view is that the learner begins with functions. Researchers like Dittmar (1981) and Meisel (1997) argue that second language research shows evidence of the acquisition of function without the acquisition of form. For example, these researchers noted that their subjects (guest-workers) often marked temporality via other means than verb morphology. Rather than using past endings and ancillary forms, some subjects used temporal adverbs such as 'yesterday' and 'in a month' with the infinitive to mark past or future time. Other subjects used other devices, such as those itemised in Table 2.1. Second-language learners have been observed to rely on implicit inferences and context to mark temporality. In the last two examples in Table 2.1, the learner is using the narrative or descriptive context to mark past time : the referee was unfair and she walked across.

- (I) Temporal adverbials: yesterday, last night
- (ii) Locative adverbials: in Vietnam, at work
- (iii) Calendar expressions: January, Tuesday
- (iv) Clause sequencing: I go to school Vietnam. I come US.
- (v) Interlocutor scaffolding:
  - Native Speaker: Yeah, tell me about your goal. How did you make it?
  - Learner: Left foot. I shoot left foot.
- (vi) Implicit reference in descriptive context :
  - Learner: I don't know what he (imitates whistle blowing).
  - Native Speaker: The referee? The referee.
  - Learner: He unfair.
- (vii) Implicit reference in descriptive context:
  - Learner: She walk across (describing snapshots).

Table 2.1 Some linguistic devices used to express temporality in the interlanguage of second language learners (McLaughlin, 1987:79)

These researchers looked at how subjects established past time reference because the interlanguage data did not indicate that they were using morphological markers. Past Tense verb forms simply did not occur in the learner's speech. But closer analysis revealed that the learners did have techniques for expressing temporality. McLaughlin (1987:74) argues that both form-to-function and function-to-form analyses are needed to understand the process of second language acquisition. Researchers need to look at how forms are mapped onto functions and how functions are mapped onto forms.

Furthermore, researchers give critical importance to the role of collaborative discourse in the acquisition process. Rather than looking at isolated utterances, for instance, of

across utterances in a conversation. For example, speakers may use temporal 'anchor points' previously established either by themselves or by their conversational partners, rather than morphological markers:

- Native Speaker: What did you do yesterday?
- Learner: Yesterday I play football. (McLaughlin, 1987:75)

It is further observed that rather than assuming that the learner first learns a form and then uses that form in discourse, it is assumed that the learner first learns how to do conversation, how to interact verbally, and out of this interaction syntactic forms develop. Although no casual relationship is claimed, the argument is made that conversation precedes syntax (McLaughlin, 1987:75).

Process-oriented approaches such as form-function mappings, functional and conversational analyses, and the role of discourse in language acquisition represent important methodological advances over the static techniques of the morpheme studies and error analyses. Another development in Interlanguage theory, as Ellis (1994:300) notes, was a re-examination of the role of the first language in second language acquisition, which is the subject of the next section.

### **2.3.2.3 The Role of the First Language Re-examined**

This section is primarily concerned with the cognitive accounts of language transfer that have now superseded the behaviourist and minimalist views which were discussed in the previous sections. It begins with a discussion of terminological issues, the term 'transfer' itself being somewhat controversial, and then goes on to describe a number of different ways in which transfer manifests itself.

#### **(i) Terminological Issues**

The terms, 'interference' and 'transfer' are closely associated with behaviourist theories of L2 learning. However, it is now widely accepted that the influence of the learner's native language cannot be adequately accounted for in terms of habit formation. Nor is transfer simply a matter of interference or falling back on the native language. Nor is it just a question of the influence of the learner's native language, as other previously acquired 'second' languages can also have an effect. This suggests that the term 'L1 transfer' itself is inadequate. It has been argued that a super-ordinate term that is theory-neutral is needed and 'cross-linguistic influence' has been suggested (see Ellis, 1994:301).

The term 'cross-linguistic influence' is said to be theory-neutral, allowing one to subsume under one heading such phenomena as transfer, interference, avoidance, borrowing and L2 related aspects of language loss and thus permitting discussion of the similarities and differences between these phenomena. However, the term 'transfer' has persisted, although its definition has been considerably broadened to include most of the cross-linguistic phenomena that are considered to be in need of attention.

Transfer is defined as the influence resulting from the similarities and differences between the target language and any other language that has been previously acquired. When viewed in this way, transfer is far removed from the original use of the term in behaviourist theories of language learning (Ellis, 1994). This definition provides an adequate bases for the material to be discussed.

## (ii) The Manifestations of Transfer

In traditional accounts of transfer, the research focus was placed on the errors that learners produce. Errors occurred as a result of the negative transfer of mother tongue patterns into the learners' L2. However, it is possible to identify a number of other manifestations of transfer. Some of these are transfer as a process, transfer of typological organisation, avoidance, overproduction of certain elements (over-use), language facilitation and

modification of hypotheses.

### ***Transfer as a Process***

With regard to transfer as a process, a study by Keller-Cohen (see McLaughlin, 1987:77) revealed that a Japanese, a Finnish and a German child acquired English interrogatives in roughly the same developmental sequence, but that the Finnish child acquired the use of yes / no questions more slowly than the other two children, presumably because of the lack of correspondence between first and second language structures. The end result was the same but the processes differed because of differences in first language.

Similarly, Zobl (1982:169-83) found that two case studies involving the acquisition of the English article system - in one instance by a Chinese speaking child and in the other by a Spanish-speaking child - indicated that the children had taken different paths to acquisition. Chinese has no formal category of articles and the Chinese child initially used a deictic determiner (this airplane) to approximate English language usage. Spanish does have articles and the Spanish child did not use the deictic determiner.

It has also been observed that speakers of some languages take longer to learn certain forms than do speakers of other languages because their own first languages have similar forms. For instance, Mori (1998:69) argues that due to their L1 experience, L2 learners from a morphographic background use more flexible strategies for phonological decoding for new characters than learners from a phonographic language background. McLaughlin (1987:77) notes that *no* + verb forms are more difficult to eliminate from the interlanguage of Spanish-speakers than they are from the interlanguage of other speakers learning English because of the existence of this pattern in Spanish.

### ***Transfer of Typological Organisation***

There is also transfer of typological organisation. It is argued that before transfer can occur

there must be a certain degree of typological similarity between first and second language structures. Without this syntactic congruity, there will be little confusion and first language forms will not appear in the interlanguage (Ellis, 1994:303).

### *Avoidance*

Transfer also manifests itself as avoidance. Learners avoid using linguistic structures which they find difficult because of differences between their native and the target language. In such cases, Ellis (1994:304) observes, the effects of the L1 are evident not in what learners do (errors) but in what they do not do (omissions). For instance, Schachter (1974:207) found that Chinese and Japanese learners of L2 English made fewer errors in the use of relative clauses than Persian or Arabic learners because they produced far fewer clauses overall (see Table 2.2)

	<b>CORRECT</b>	<b>ERROR</b>	<b>TOTAL</b>	<b>% OF ERRORS</b>
Persian	131	43	174	25
Arab	123	31	154	20
Chinese	67	9	76	12
Japanese	58	5	63	8
American	173	0	173	0

Table 2.2 Relative clause production in five languages (Ellis, 1994:304)

Ellis (1994:304) suggests that the difficulty for the Chinese and Japanese learners may lie in the fact that while their mother tongues are left-branching (i.e. nouns are pre-modified), English is primarily right-branching (i.e. nouns are post-modified). Persian and Arabic are also right-branching. It is this which leads Chinese and Japanese learners of L2 English to avoid using relative clause.

The identification of avoidance is not an easy task. It is only possible to claim that

avoidance has taken place if the learner has demonstrated knowledge of the form in question, and if there is evidence available that native speakers of the L2 would use the form in the context under consideration. Ellis (1994:305) reports that even demonstrating knowledge of a structure is not sufficient. For instance, Hebrew speakers of English may know how to use the passive, but their infrequent use of it in the L2 may simply reflect the general preference for active over passive in L1 Hebrew rather than avoidance (i.e. negative transfer). Thus, it is also necessary to demonstrate the structure is not under-used simply because it is rare in the L1.

Three types of avoidance can be distinguished. Avoidance 1 occurs when learners know or anticipate that there is a problem and have at least some sketchy idea of what the target form is like. Avoidance 2 arises when learners know what the target is but find it too difficult to use in the particular circumstances. Avoidance 3 is evident when learners know what to say and how to say it but are unwilling to actually say it because it will result in them flouting their own norms of behaviour (Ellis, 1994:305).

In all three cases, it is clear that much more is involved than the learner's L1. The extent of learner's knowledge of the L2 and the attitudes learners hold toward their own and the target language cultures act as factors that interact with L1 knowledge to determine avoidance behaviour.

### ***Over-Use - Over-Production***

Another manifestation of transfer is over-use or overproduction of certain elements. Ellis (1994:305) argues that the over-use or over-indulgence of certain grammatical forms in L2 acquisition can occur as a result of intralingual processes such as over-generalisation. For example, L2 learners have often been observed to over-generalise the regular past tense inflection to irregular verbs in L2 English (for example, 'costed'). Similarly, learners may demonstrate a preference for words which can be generalised to a large number of contexts. Over-use, as in the case of avoidance, can only be detected by comparing groups of learners

with different L1's, Ellis maintains.

### ***Language Facilitation***

Transfer may also be facilitative of L2 learning. Ellis (1994:302) points out that the facilitative effects can only be observed when learners with different native languages are studied and learner comparisons are carried out. He argues that facilitation is evident not so much in the total absence of certain errors - as would be expected on the basis of behaviourist notions of positive transfer - but rather in a reduced number of errors and, also in the rate of learning.

Furthermore, the facilitative effect of L1 can also be adduced by certain types of U-shaped behaviour. Learners may sometimes pass through early stages of development where they manifest correct use of a target-language feature if this feature corresponds to a L1 feature and then, subsequently, replace it with a developmental L2 feature before finally returning to the correct target language feature. In such a case, the facilitative effect is evident in the early stages of acquisition, before the learner is 'ready' to construct a developmental rule. The 're-learning' of the correct target language rule occurs when learners abandon the developmental rule as they come to notice that it is incompatible with the input (Ellis, 1994:302).

### ***Modification of Hypotheses***

Transfer also manifests itself as modification of hypotheses. McLaughlin (1987:78) argues that the learner's previous knowledge constrains the hypotheses that are possible about the new language. Thus transfer should not be thought of simply in terms of its direct effect on the learner, but also in terms of the more indirect, higher-order influence it has on hypothesis formation (Gass & Selinker, 1992)

In addition, it is noted that previous knowledge of language includes the new information

the learner has gained about the target language, which may be incomplete and inaccurate. Hence learners may make mistaken generalisations based on their faulty hypotheses about the target language (see McLaughlin, 1987:78).

To conclude this section, it can be noted that the concept of transfer has taken on a number of different meanings for researchers and that in much of this research the influence of the first language would have gone unobserved were the traditional product-oriented definition of transfer used. The shift from a product to a process orientation has drawn attention to the more subtle and non-obvious effects of the first language on interlanguage development. It has become apparent that the first language does affect the course of interlanguage development, but this influence is not always predictable.

## **2.4 Evaluation**

Interlanguage Theory is amongst the oldest cognitive theories of L2 learning. Other cognitive theories such as the variability theories owe their existence to researchers who were working within the framework of Interlanguage Theory. Its major contribution to interlanguage studies is its continued probe into the nature of strategies that are responsible for interlanguage development. Four major hypotheses have been central to Interlanguage Theory debates: the Contrastive Analysis Hypothesis (CAH), the Creative Construction Hypothesis (CCH), the Interlanguage Hypothesis (ILH), and the Fossilization Hypothesis. The strengths and weaknesses of the hypotheses are briefly discussed.

Although CAH became discredited because of overpredicting and underpredicting the difficulties of second language learners, the pioneering work of contrastive analysts has continued to influence interlanguage studies. The hypothesis explained second language learning as the development of a new set of habits. Its prediction was that virtually all errors were explainable as interference from L1. Learning was guaranteed to be easy where L1 habits led to correct L2 performance. When these predictions could not be confirmed, CAH was rejected. The “baby and the bathwater syndrome” (Selinker, 1992) has not been

effective because the influence of L1 is still regarded as a dominant one (Odlin, 1989; Sharwood Smith, 1994; Mori, 1998; Gass & Selinker, 1992; Selinker, 1992; Ellis, 1994; Koda, 1998).

In fact, downgrading the status of transfer was an unnecessary precaution against behaviourism. The possibility of applying principles specific to the L1 system in the creation of L2 knowledge is, by definition not available to to an acquirer of an L1. There is no previous 'L1' available (Sharwood Smith, 1994:105). This means that transfer occurring in L2 acquisition may easily be the application of processes available in principle to L1 acquirers but not used crosslinguistically. For example, Mori (1998:69) argues that there is interaction between L1 background and the phonological inaccessibility of stimuli which is caused by the fact that L2 learners from a morphographic language background use more flexible strategies for phonological decoding for new characters than learners from a phonographic language background. In her investigation of the role of L1 grammar in the L2 acquisition of segmental structure, Brown (1998) concludes that a speaker's L1 may actually impede the operation of UG, preventing the learner from acquiring a nonnative phonemic contrast.

L1 transfer is still regarded as a major factor in L2 learning and is defined as the influence of the L2 learner's previous knowledge, regardless of the source of that knowledge (Gass & Selinker, 1992). In this sense, overgeneralisation, transfer of training and other L2 learning strategies can be subsumed under the term, L1 transfer or crosslinguistic influences or any other suitable term. There is a need for more research of the kind of Mori's and Brown's that would help in the identification of what is transferred and when it is transferred.

The Creative Construction Hypothesis denied or relegated L1 influence to a very minor position. The hypothesis predicts that L2 learners would not show very much L1 influence in their spontaneous performance, apart from accent. L2 learners would commit developmental errors as an indication that they are actively and creatively involved with the L2 rather than relying on their L1's. These predictions have been proved not to be

completely accurate.

Researchers (e.g. Sharwood Smith, 1994) have identified a number of gaps in the Creative Construction Hypothesis. Creative construction theorists did not differentiate between subsystems within the grammar and, in the absence of disclaimers, we must assume that the inbuilt syllabus for morpheme acquisition (and hence the absence of L1 influence) was claimed to hold for all grammar. Also, creative construction theorists did not differentiate between the development of knowledge (competence) and the development of processing control over knowledge, especially with regard to the interpretation of developmental sequences. These theorists did not allow for systematic individual variation in the development of competence. Theorists also did not involve a proper application of the principles of the linguistic framework to which it claimed allegiance, i.e. generative grammar. Even if the theorists did these things, it might be argued that it was not to any serious extent (Sharwood Smith, 1994:103). These gaps, however, do not warrant a complete rejection of the hypothesis. There is evidence (e.g. Krashen, 1982; Wakabayashi, 1996; Meisel, 1997) of UG-accessible L2 learning.

The Interlanguage Hypothesis (associated with Selinker, 1972; Nemser, 1971; Corder, 1967; Adjemian, 1976; Tarone, 1978) perceived learners as operating with their own set of rules, some of which reflected the L1 rules. Hence some but not all L1-based deviations from the L2 norms would be expected. In fact, the hypothesis led some researchers (e.g. Ellis, 1994) to concluding that interlanguage development is dominated by the L1 in some aspects and by creative construction in others. It would be useful for researchers to determine which aspects of the L2 are likely to be dominated by the L1 and which by the L2.

Another important claim made by Interlanguage Theory is the Fossilisation Hypothesis. The hypothesis predicts that the L2 ceases to elaborate the interlanguage in some respects, no matter how long there is exposure, new data, or new teaching. Fossilisation is said to result from processes or strategies which L2 learners employ in the learning process, for example,

transfer and communication strategies. Other factors like the age of the learner, social and psychological factors, teaching approaches have been hypothesized to cause fossilization.

An interesting development is the evidence that native-like L2 proficiency is achievable (White & Genesee, 1996; Leow, 1998). In their article which investigated the issue of ultimate attainment in adult second language acquisition, White and Genesee (1996:233) conclude that native-like competence in an L2 is achievable, even by older L2 learners. Multiple and learner-centered exposures, Leow (1998:62) suggests, can be beneficial. More research is needed to investigate which items fossilize and how these items could be predicted.

## **2.5 Conclusion**

In conclusion, it is important to highlight some of the crucial issues that have been raised. The development of Interlanguage Theory has been traced. The Behaviourist Learning Theory which accorded the L1 a dominant role in L2 acquisition, the advocate of a natural route of acquisition which minimised the influence of the L1, and the emergence and development of the Interlanguage Hypothesis which predicts a multifactor influence on interlanguage development feature the dominant thought of interlanguage theorists.

Major points throughout this chapter have been that, in some sense, hints of the notion interlanguage have been in the writings about learning a second language "albeit hurried and unnamed", long before interlanguage emerged as a theory and that, like the phenomenon it seeks to describe, Interlanguage theory has been fluid and amorphous, constantly changing and incorporating new ideas. Error analysis made clear the inadequacies of a rigid behaviourist-structuralist position. More recent work on transfer has made apparent the folly of denying first-language influence any role in interlanguage development. Process-oriented approaches have led to a better understanding of how interlanguage develops or is acquired and has also helped to provide a richer language transfer perspective which appears to dominate the interlanguage paradigm currently.

# CHAPTER 3

## THEORIES BASED ON IMPLICIT - EXPLICIT KNOWLEDGE DISTINCTIONS

### 3.1 Introduction

This chapter examines theories based on implicit-explicit distinctions. The primary concern of these theories, as Ellis (1994:349) notes, is to identify the relationship between implicit and explicit knowledge and how these are used in L2 output. The focus of this chapter is on two conflicting positions regarding this relationship. One position, Krashen's (1981, 1982, 1985) brainchild, claims that learning (which is associated with explicit knowledge) cannot become acquisition (which is associated with implicit knowledge). Krashen insists on this non-interface position even though there is considerable criticism from various researchers. The other position, often associated with Bialystok (1978), posits an interface between learning and acquisition. These positions are examined with regard to the arguments advanced and the research on which these arguments are based.

### 3.2 The Non-Interface Position

#### 3.2.1 Monitor Theory

In a series of books and papers appearing between 1978 and 1985, Krashen developed a theory - the Monitor Theory - of child and adult, naturalistic and instructed second-language acquisition. Its scope broadened to include a wide array of second language phenomena, with a 'hypothesis' summarising Krashen's conclusion in each area of literature he surveyed. These hypotheses were reduced from ten to five major claims (Krashen 1981; 1982). They are the Acquisition-Learning Hypothesis, Natural Order Hypothesis, Monitor Hypothesis, Input Hypothesis and Affective Filter Hypothesis. The non-interface view is based on these hypotheses. A brief explanation of each of them follows. Then a critique of how well or poorly these hypotheses fit into Krashen's non-interface view will follow.

### 3.2.1.1

### The Acquisition-Learning Hypothesis

This hypothesis states that adult second-language learners have at their disposal two distinct and independent ways of developing competence in a second language: acquisition, which is a “subconscious process identical in all important ways to the process children utilise in acquiring their first language” and learning, which is a “conscious process that results in knowing about language” (Krashen, 1985:1). As Krashen notes, acquisition comes about through meaningful interaction in a natural communication setting. In other words, speakers are not concerned with form, but with meaning, nor is there explicit concern with error detection and correction. This contrasts with the language learning situation in which error detection and correction are central, as is typically the case in classroom settings where formal rules and feedback provide the basis for language instruction. Nonetheless, for Krashen it is not the setting per se, but conscious attention to rules that distinguishes language acquisition from language learning.

Also, Krashen (1982:83) states that learning does not turn into acquisition. That is, according to Krashen, what is consciously learned, through the presentation of rules and explanations of grammar, does not become the basis of acquisition of the target language. The argument that conscious learning does not become unconscious acquisition is based on three claims, as Krashen (1982:83-87) notes:

- i) Sometimes there is acquisition without learning. That is, some individuals have considerable competence in a second language but do not know very many rules consciously.
- ii) There are cases where learning never becomes acquisition. That is, a person can know the rule and continue breaking it.
- iii) No one knows anywhere near all the rules.

The acquisition-learning hypothesis has been criticised for the claim that learning does not become acquisition, as is discussed in section 3.2.2.

### **3.2.1.2 The Monitor Hypothesis**

According to Krashen (1982:15), learning and acquisition are used in very specific ways in second-language performance. The Monitor Hypothesis claims that “Learning has only one function, and that is as a Monitor or editor”, and that learning comes into play only to make changes in the form of our utterances, after it has been produced by the acquired system (Krashen, 1982:15). Acquisition initiates the speaker’s utterances and is responsible for fluency. Thus the Monitor is thought to alter the output of the acquired system before or after the utterance is actually written or spoken, but the utterance is initiated entirely by the acquired system. Krashen also claims that learning is available for use in production, and not in comprehension.

Furthermore, as Krashen (1982:16) notes, the Monitor cannot be used unless the following three necessary but not sufficient conditions are met:

- Time: In order to think about and use conscious rules effectively, a second-language performer needs to have sufficient time.
- Focus on form: The performer must also be focused on form, or thinking about correctness.
- Knowledge of the rule.

Krashen (1982:19-20) distinguishes three types of Monitor users. There are Monitor over-users, Monitor under-users and optimal Monitor users. According to Krashen, Monitor over-users are either individuals who have been victims of a grammar-only type of instruction, or individuals who are inclined by personality to learn languages by consciously applying rules. In contrast, under-users are those individuals who are thought to make no, or very little, use of conscious rules. The evidence for these different types of performers is based on case studies. The claims made by the Monitor Hypothesis have also been criticised (see section 3.2.2).

### **3.2.1.3 The Natural Order Hypothesis**

The Natural Order Hypothesis states that second-language rules are acquired in predictable order which is not determined by the order in which items appear in teaching syllabuses. Acquisition orders do not reflect instructional sequences. As Krashen (1985:1) puts it:

*We acquire the rules of language in a predictable order, some rules tending to come early, and others late. The order does not appear to be determined solely by formal simplicity and there is evidence that it is independent of the order in which rules are taught in language classes.*

In addition, Krashen argues that those students whose exposure to second language is nearly all outside of language classes do not show a different order of acquisition from those who have had most of their second language experience in the classroom. This natural order of acquisition is presumed to be the result of the acquired system, operating free of conscious grammar (the Monitor).

The principal source of evidence for the Natural Order Hypothesis comes from Morpheme Studies. Dulay and Burt (1974), for example, published a study of what they called the order of acquisition of grammatical morphemes or functions in English by five-to eight-year children learning English as a second language. Results show that 85% of the errors were developmental. These researchers came to the conclusion that there may be a 'universal or natural order' in which L2 children acquire certain morphemes. They also concluded that exposing a child to a natural communication situation is sufficient for L2 acquisition to take place.

#### **3.2.1.4 The Input Hypothesis**

If we assume, as Krashen does, that learners progress through natural developmental sequences, we need some mechanism to account for how they go from one point to another. This hypothesis, as Krashen (1985:2) notes, postulates that

*Humans acquire language in only one way - by understanding messages, or by receiving comprehensible input. We move from our current level  $i$ , to  $i+1$ , the next level along the natural order, by understanding input containing  $i + 1$ .*

Krashen (1980:168) regards this as "the single most important concept in second language acquisition today," in that "it attempts to answer the critical question of how we acquire language". Krashen (1985:2) states that there are two corollaries of the Input Hypothesis:

- (i) Speaking is a result of acquisition and not its cause. Speech cannot be taught directly, but ‘emerges’ on its own as a result of building competence via comprehensible input.
- (ii) If input is understood, and there is enough of it, the necessary grammar is automatically provided. The language teacher need not attempt deliberately to teach the next structure along the natural order – it will be provided in just the right quantities and automatically reviewed if the student receives a sufficient amount of comprehensible input.

Thus, for Krashen comprehensible input is the route to acquisition, and information about grammar in the target language is automatically available when the input is understood.

Krashen (1982) provides empirical evidence in support of the Input Hypothesis. First, there is the silent period – a phenomenon which has been observed to occur in some children who come to a new country where they are exposed to a new language, and are silent for a long period of time. During this period they are presumably building up their competence in the language by listening and understanding before speech emerges on its own. Second, the three characteristics of simple codes (simplified input) assist language acquisition. These are:

- (i) these codes (caretaker speech or motherese or baby talk) are used to communicate meaning, not to teach language,
- (ii) they are roughly-tuned, not finely tuned, to the learner’s current level of linguistic competence, and
- (iii) they follow the here-and-now principle.

The Input Hypothesis, particularly the evidence in support of it, has been criticized as section 3.2.2 indicates.

### **3.2.1.5 The Affective Filter Hypothesis**

Krashen (1985:6) argues that comprehensive input is a necessary, but not a sufficient condition for successful acquisition. Affective factors are also seen to play an important

role in acquiring a second language. According to the Affective Filter Hypothesis, comprehensible input may not be utilized by second-language acquirers if there is a mental block that prevents them from fully profiting from it. The affective filter acts as a barrier to acquisition: if the filter is 'down', the input reaches the Language Acquisition Device (LAD) and becomes acquired competence; if the filter is 'up', the input is blocked and does not reach the LAD (Figure 3.1).

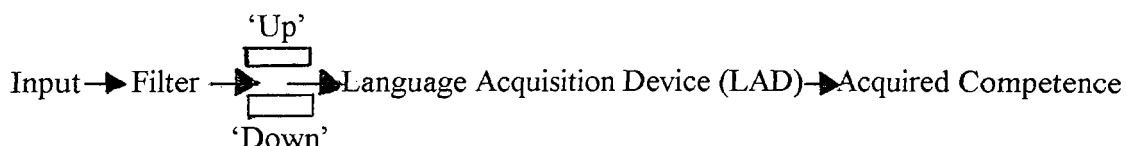


Figure 3.1. The operation of the 'Affective Filter' (based on Krashen, 1982).

Thus, as Krashen (1982:32) puts it:

*Input is the primary causative variable in second language acquisition, affective variables acting to impede or facilitate the delivery of input to the language acquisition device.*

Krashen (1982:32) maintains that acquirers need to be open to the input and that when the affective filter is up, the learner may understand what is seen and read, but the input will not reach the LAD. This occurs when the acquirer is unmotivated, lacking in confidence, or concerned with failure. The filter is down when the acquirer is not anxious and is intent on becoming a member of the group speaking the target language.

For Krashen, the affective filter is the principal source of individual differences in second-language acquisition. As Krashen (1982:31) puts it:

*The Affective Filter Hypothesis captures the relationship between affective variables and the process of second language acquisition by posing that acquirers vary with respect to the strength or level of their affective filters. Those whose attitudes are not optimal for second language acquisition will not only tend to seek less input, but they will also have high or strong affective filters – even if they understand the message, the input will not reach that part of the brain responsible for language acquisition, or the Language*

*Acquisition Device. Those with attitude more conducive to second language acquisition will not only seek and obtain more input, they will also have a lower or weaker filter.*

### **3.2.2 An Evaluation of the Non-interface Position**

Any language teaching theory is bound to be confronted with the question of how to cope with language learners' most persistent difficulties (Stern, 1983:401). The Monitor Model is no exception. Its speculations and controversies about language learning and teaching reflect the key problems encountered by most learners. The most important problem that L2 learners encounter is the inability to communicate fluently after having spent a lot of time during their school grades learning the L2 (Krashen, 1985). The Monitor Theory has not only an explanation for this state of affairs but also offers practical suggestions for the language teacher.

Krashen (1982) puts the blame for the L2 learners' failure to achieve communicative competence on the conditions of learning and the learning process. His theory draws attention to the age-long dilemma of whether the learner should treat the language task intellectually and systematically as a mental problem, or whether he/she should avoid thinking about the language and absorb the language more intuitively. As stated above, Krashen's distinction between language learning (explicit) and language acquisition (implicit) treats language 'learning' as a conscious process, and 'acquisition' as more subconscious.

To learn a language (consciously) the learner must know the rules of the language. Given these conditions, the learner can 'monitor' his linguistic output. Krashen has argued that the Monitor acts as a kind of editor. The Monitor comes into play particularly in reading and writing in the second language because under these conditions there is time to go over and check the linguistic output. In spoken communication the Monitor would tend to interfere with fluency. Some language learners overuse the Monitor and become inhibited, others are over-confident and underuse it. For the development of L2 proficiency, the acquisition process, in Krashen's view, is more important than learning. In other words, communicative competence develops more through unselfconscious use in communication than through conscious study and the slow control of the language by the Monitor.

In fact, the concepts of language learning research are in many instances psychological reformulations of issues that have been long-standing interpretations entertained by experienced language teachers. After all, language teachers are in a good position to observe patterns of language learning and to appreciate intuitively the characteristics of poor and good learners and to surmise why some students make progress and others run into difficulties.

The Monitor Theory provides a framework for interpreting the language learning process. The Natural Order Hypothesis predicts that L2 rules would be acquired in a predictable order. That is to say, language learning is a developmental process which cannot be fully controlled by feeding the language to the learner in slow incremental steps. This hypothesis links the Monitor Theory to the interlanguage theory (Creative Construction Hypothesis) in Chapter 2 and to the Multidimensional Model in Chapter 5. Teachers cannot alter this order. Teachers can help the acquisition process by providing comprehensive input rather than explicitly teaching grammar. The Input Hypothesis predicts that the L2 learner will simply 'pick up' a rule from the input when she/he is 'ready' for it. Since the teacher does not know what the current input level,  $i$ , of the learner is, the teacher must provide roughly tuned rather than providing fine-tuned input which would target the next input level  $i + 1$ . The Affective Filter Hypothesis predicts that no matter how comprehensive the input may be, if an anxiety-free environment is not established all teaching efforts are doomed to fail.

The theory is appealing to teachers because it offers practical and intuitively sound solutions to the challenges of developing L2 learners' communicative competence. Language teachers are in a good position to observe patterns of language learning and to appreciate intuitively the characteristics of poor and good learners and to surmise why some students progress and others run into some difficulties. The Monitor Theory has helped teachers to develop concepts about language learning and to recognize possible relationships between learning outcomes, the learning process, learner characteristics, the conditions of learning and the social and linguistic context in which learning occurs.

The theory has, however, been criticized for not clearly articulating the learning-acquisition distinction. Researchers (e.g. Gregg, 1984; McLaughlin, 1987; Hulstijn & Hulstijn, 1984) argue that as long as the Monitor Theory remains unable to empirically isolate the acquired

system from the learned system, while continuing to claim that they are separate, this theory may well remain immune from empirical validation. These researchers have identified a number of research gaps in the Monitor Theory which weaken Krashen's claims of non-interface between implicit and explicit L2 knowledge. First, they argue that the slipperiness of the acquisition-learning distinction (see 3.2.1.1) makes Krashen's first hypothesis a weak source of support for the non-interface position. Gregg (1984:81) argues that Krashen's claim about the learning-acquisition distinction runs counter to the intuitive belief of many of L2 learners, for whom it seems obvious that at least some rules can be acquired through learning. McLaughlin (1987:21) proposes that Krashen should make what he means by 'conscious' and 'subconscious' because it is impossible to know whether subjects in an experiment are operating on the basis of 'rule' or 'feel'. Hulstijn and Hulstijn (1984) suggest that there must be clear experimental conditions in terms of which we are able to tell objectively whether one system or the other is involved in a given situation.

The Monitor Hypothesis (see 3.2.1.2) also lends poor support to the non-interface position. Gregg (1984:83) insists on evidence for Krashen's claim that learning is only available for use in production and not in comprehension. With regard to monitor use, McLaughlin (1987:27) points out that research has demonstrated either (1) that the monitor is rarely employed under normal conditions of SLA and use, or (2) that the monitor is a theoretically useless concept.

With regard to the Natural Order Hypothesis (3.2.1.3), Taylor (1986) argues that if learners display common orders of acquisition, then Krashen fails to explain how these findings support his claim of a non-interface and the reader is required to much by faith.

The Input Hypothesis (3.2.1.4) is also criticized as a source of support for the non-interface by researchers. For instance Gregg (1984:87) complains that Krashen's account of  $i + 1$  is not clear as it sometimes seem to mean the next structure to be acquired, and sometimes the learner's competence at one stage after  $i$ . Taylor (1986) notes that there is no logical connection between Krashen's account of the Input Hypothesis and the non-interface position.

Finally, researchers note that the Affective Filter Hypothesis is not a reliable support for the non-interface position. McLaughlin (1987:54) observes that the hypothesis is not precise

enough about how a filter would operate; no attempt has been made to tie the filter to linguistic theory and specific predictions are impossible, and some predictions are blatantly obscure.

Summing up, it appears that the Monitor Theory fails at every juncture to provide reliable evidence in support of the non-interface position. Krashen has not defined his terms with enough precision, the empirical basis of the theory is weak, and the theory is not clear in its predictions. Apart from the research gaps that have been identified the non-interface view has been extremely influential in language teaching circles. The instructional implications are discussed in Chapter 7.

### **3.3 The interface position**

#### **3.3.1 An Overview**

The interface position posits a connection between explicit and implicit knowledge of the language. This implies that explicit grammar instruction (EGI), or conscious learning of rules, can become implicit or subconscious knowledge of grammar, or acquisition. Bialystok (1979:81), the champion of the interface position, states that “the proficient use of a language, either native or non-native, depends on a complex interplay of information that is either explicitly consulted or intuitively based”. The problem, she notes, is to identify those language tasks which could be accommodated by an intuitive or an implicit knowledge of the language and those which require the intervention of a set of formalized rules.

In a study which examines the differential use of formal explicit knowledge and intuitive implicit knowledge in a L2 grammaticality judgement task, Bialystok (1979:80) hypothesizes that a set of conditions can be established which serve to identify the occasions in which each of these specialized types of knowledge will be used. She describes the conditions as task-related and learner-related factors. Three task-related factors are postulated to serve as predictors for the intervention of explicit knowledge in a language task. These factors are the amount of formal detail required, the specific linguistic structure contained in the response, and the length of time allowed to respond. Learner-related

variables include the age of the learner, the level of study in the target language, and the language background of the individual learner. Greater use of implicit knowledge may be exhibited by young learners, advanced learners, and learners who additionally speak other languages. The results of Bialystok's (1979) study indicate that explicit knowledge intervenes for incorrect sentences requiring detailed responses and that knowledge of another language is beneficial for certain conditions. Bialystok (1979:101) concludes that both the learners' intuitions and strategies for consulting explicit knowledge when necessary are crucial for language proficiency development. As figure 3.1 indicates, "concentration on only the formal aspects of the language and rule formation not only precludes important aspects of the language but ignores as well the use of the learners' great intuitive resource" (Bialystok, 1979:101).

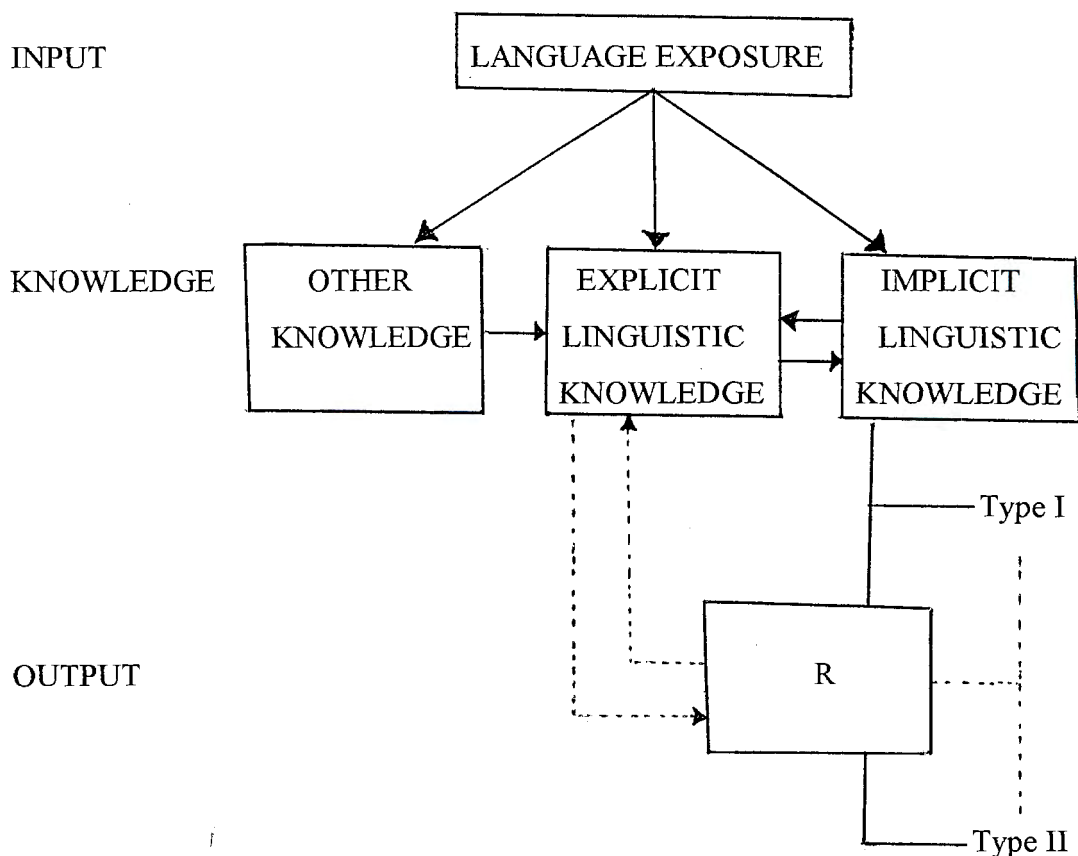


Figure 3.2 Bialystok's Model (1978) of the Interface Position

The continuous lines (-) in figure 3.1 refer to inevitable processes, i.e. obligatory relationships. The broken lines (----) represent optional strategies in language learning. Of special relevance here is the broken line which connects implicit and explicit knowledge. This, as Bialystok (1978:77) notes, denotes the strategy of formal practice which has the

result of allowing information to move from explicit knowledge to implicit knowledge via automatisisation. Furthermore, Bialystok (1981a) has identified and examined the effect on L2 learning of three conscious strategies. These are practising (formal and functional), monitoring and inferencing. These strategies are examined in terms of two parameters – purpose and modality, which characterize the various occasions of a formal/functional dimension. Formal language use refers to the language code, language itself as a structured, rule-bound system, whereas functional language is concerned with the use of language in communicative situations. However, as Bialystok (1981a:24) notes, these designations are not absolute, but relative to each other on a hypothetical continuum of formal/functional language use. Modality, Bialystok (1981a) notes, classifies the language as being either oral or written, and strategies suitable for language learning in one modality may facilitate language learning of that type only.

Thus, a four-cell classification of strategies which describes four types of language is produced. The four language types are:

- 1) Formal/Oral
- 2) Formal written
- 3) Functional/oral
- 4) Functional/written

All the strategies, Bialystok (1981a) points out, may be exercised in any of the cells, but may, nonetheless, be differentially appropriate for the four language groups of strategies according to their maximal approximation to those categories. As Bialystok (1981a) observes, the formal strategies are formal practice and monitoring, and the functional strategies are functional practice and inferencing. All strategies, she notes, may be used for language in oral or written modality.

In her study, Bialystok (1981a) measures the extent of the use of these strategies by high school students and assesses their effects on the achievement of these students. She hypothesizes that the

use of these strategies will facilitate performance in L2 learning, and that the effects of these strategies are specific to the type of language for which they are employed. In other words, achievement will be maximally affected in tasks most similar to the language situations in which the language learner has employed the strategies.

An examination of the specific relationships between the strategies and achievement indicates where some of these strategies may be maximally effective. For instance, monitoring is most beneficial for tasks requiring attention to form; strategies exercised for oral language improve performance on oral tasks; written strategies facilitate performance on written tasks. Functional practice, however, proves to be critical to achievement on all tasks. This last finding suggests an important pedagogical implication concerning the presentation of information in language classrooms. Perhaps, the formal aspect of the language would be better learned in a communicative context.

Bialystok (1981a) concludes that, given the elegance of these learning strategies for improving L2 competence, it is important to examine both the conditions under which the strategies are employed and the language learner who uses them.

In her paper, "On the relationship between knowing and using linguistic forms", Bialystok (1982) points out that descriptions of learner proficiency must be placed in the context of a description of the demands being placed on the learners. She argues that a learner may appear to have a different mastery of the language when the demands of the task change. As she proposes, we need more analytic descriptions of proficiency, which take account of what the learner is being asked to do. She thus outlines a framework for analyzing the demands made on the learner and reports on two studies which examine learner proficiency in various task situations as a function of those demands. The attempt is to understand both the constraints that operate to produce variability in learner speech and the principles that contribute to progressive mastery of the target language.

Bialystok (1982:182) points out that her framework is based on the notion that language situations impose different cognitive, linguistic and social demands and that learners will succeed only in those situations where their ability matches those demands. The development of proficiency involves the development of the ability to meet more stringent

demands through the language in a variety of social contexts. These demands on the learner have been described in terms of control over two factors – analyzed representations of knowledge and automatic access to information. Bialystok (1982) notes that the application of the distinction between analyzed and unanalyzed knowledge to language proficiently is functional. In other words, the assumption is that if knowledge is analyzed, then certain uses may be made of that knowledge which cannot be made of knowledge that is unanalyzed.

The automatic factor is defined as “the relative access the learner has to the knowledge, irrespective of its degree of analysis” (Bialystok 1982:183). In terms of this factor, learners are seen to vary in their ability to retrieve information, and different situations are seen to place different demands on that retrieval. For example, fluent conversation requires better access to the relevant linguistic information than does the preparation of written text because, in the latter case, the learner may consult various sources to assist where memory fails. In brief, Bialystok regards an individual learner’s retrieval procedure as varying according to the demands of the situation, the information required and the fluency or automaticity of the individual’s control over the information.

For both factors, Bialystok (1982) argues, the positive value is considered to be marked with respect to the negative. Thus, ‘analyzed’ is marked with respect to ‘unanalyzed’ and ‘automatic’ is marked with respect to ‘non-automatic’. As she notes, language tasks can be placed in a matrix according to their demands for information marked on one or both of these facts. The prediction concerning the development of proficiency is that the unmarked forms of knowledge precede the marked forms. Thus, development involves achieving an analyzed understanding of and automatic access to information which is already known in less specialized forms. Nonetheless, Bialystok sees these factors as continua rather than categories. In brief, language development is seen as progressive mastery of analyzed and automatic control (Bialystok 1982, 1990).

### **3.3.2 Evaluation of the Interface Position**

Bialystok’s interface position is both theoretically and empirically sound. However, it must be stated that her claim that unanalyzed knowledge must precede analyzed knowledge is a controversial one. It is quite possible, as she (1981a:34) herself points out, to learn formal

aspects of language and, then, through functional practice, learn to use these rules in various communicative situations until automatic access to them is achieved. Such a claim is contrary to experience of countless teachers and students. Gregg's (1984) experience with learning to speak Japanese is but one of numerous examples. As Hulstijn (1990) observes, this claim appears to be at variance with the fact that many L2 learners, especially those being instructed with a grammar method, use explicit grammar rules as the starting point for the establishment of automatic routines. In brief, this restriction is suspect as it is not supported by experience.

In summary, it can be stated that Bialystok advocates an interface between explicit (analyzed) and implicit (unanalyzed) knowledge. The proficient use of language depends, according to her, on a complex interplay of information that is either explicitly consulted or intuitively based. She identifies occasions in which each of these types of knowledge will be used as well as the strategies for consulting each type of knowledge. In her framework, she suggests that the description of learner proficiency must be placed in the context of a description of the demands being placed on the learners. These demands must be described in terms of control over analyzed representations of knowledge and automatic access to information. Thus, language development should be seen as progressive mastery of analyzed and automatic control.

### **3.4 Conclusion**

Both non-interface and the interface positions are strongly presented. However, the relationship between explicit and implicit L2 knowledge has remained an unresolved issue in second language learning as much as in language learning research. The interplay between formal learning of the language as a code and the learning of the language through use in communication has aroused widespread attention (see Sharwood Smith, 1981; Ellis, 1998; Louw, 1998). Whether to make a rigid choice between learning and acquisition or accept the view that the distinction between the two is one of degree, as variability theorists do in the next chapter, deserves further investigation.

# CHAPTER 4

## VARIABILITY THEORIES OF L2 ACQUISITION

### 4.1 Introduction

Variability theories of L2 acquisition are mainly concerned with the relationship between interlanguage variability and L2 acquisition. Variability is inherent in language-learner language. The natural route, which was discussed in Chapter 2, does not manifest itself in a series of clearly delineated stages. Rather each stage overlaps with the one that precedes and follows it. Each new rule is slowly extended over a range of linguistic contexts. Therefore, at any given stage of development, the learner's interlanguage system will contain a number of competing rules, with one rule guiding performance on one occasion and another rule on a different occasion. In addition, each interlanguage system contains linguistic forms that are in free variation. These forms are not guided by rules and their use is not systematic.

These types of variability pose both practical and theoretical problems for L2 research. The practical problems concern how data are to be collected in order to study language-learner language. If the learner's performance varies from one task to another, how can the researcher evaluate the particular data he has collected? The theoretical problems concern how the inherent variability of the learner's performance should be reconciled with claims that interlanguage is systematic, and how non-systematic variability should be accounted for.

This chapter examines these practical and theoretical problems. To do so, two variability models are considered: Tarone's Capability Continuum Paradigm (CCP) and Ellis' Variable Competence Model (VCM). The claims made by the models as well as the research on which the claims are based are discussed and a critique of the models is also presented.

## 4.2 The Capability Continuum Paradigm

### 4.2.1 Characteristics of the Capability Continuum Paradigm

Tarone (1979:181) sees interlanguage as a continuum of styles, defined by the amount of attention paid to speech. As she claims, interlanguage, in its use in human interactions, varies with the subtlest shifts of situation, just as the chameleon changes colour as its surroundings change. Tarone's view of interlanguage variability is shaped by Labov's (1972) five axioms, which lead to the so-called "Observer's Paradox." These axioms will be briefly examined in terms of how they capture Tarone's view of interlanguage variability and its relationship to L2 acquisition.

The first axiom, style shifting, claims that there are no single style speakers because every speaker shifts linguistic and phonetic variables as the social situation and topic change. Tarone (1985:373) states that, as second-language learners attempt to communicate in the target language, their language production will show systematic variability, similar to that which has been demonstrated to exist in the speech of native speakers. Specifically, she argues, it has been claimed that as second-language learners perform different tasks at a single point in time, their production of some grammatical, morphological, and phonological structures will vary in a predictable manner. Her argument is as follows:

*For example, in interlanguage (IL) phonology, Dickerson and Dickerson (1977) have shown that Japanese learners of English "style-shift" in this way in their production of /r/ depending on which of three tasks they are asked to perform: reading a word list, reading a dialogue, or "speaking freely".*

Figure 4.1 indicates this shift of phonetic variables which is related to task.

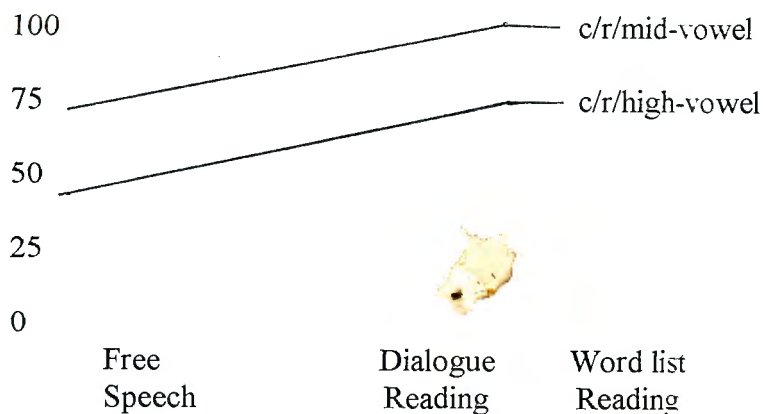


Figure 4.1 Production of /r/ in contexts: c/r/ mid-vowel and c/r/ high-vowel (Tarone, 1985:378)

In a study of style shifting in morphology and syntax, Tarone (1985:383) notes that systematic variability exists in the learners' production of some grammatical and morphological forms. However, as she observes, we cannot say that systematic variability occurs in all IL forms. The study also shows that performance of L2 learners on a written grammar test varies from their performance when they attempt to communicate orally.

In some cases, grammatical accuracy is much better in spontaneous oral communication than in scores on a written grammar test. In their study of articles, Tarone and Parrish (1988:21) argue that this change in accuracy is due to the communicative demands and discourse characteristics of the tasks. They (1988:21) put it as follows:

*Task-related variability in interlanguage must be due, not to a single variable called "attention to form," but to a complex of variables, at least one of which must be the differing communicative functions which forms may perform in different tasks, as, for example, when these tasks place different degrees of communicative pressure upon the speaker, or elicit discourse which varies in its cohesiveness.*

Tarone and Parrish (1988:36) conclude that their analysis provides support for Littlewood's (1981) proposal that three factors influence variation in interlanguage: the communicative function of a feature, the linguistic environment of that feature, and social/situational factors such as formality of situation and ability to attend to form. As they (1988:37) observe, it is

clear that we need more data in order to learn more about the dynamics of style shifting across tasks, and in order to be able to make stronger conclusions about this phenomenon.

Also noteworthy is the fact that this variability in language production is systematic. Interlanguage can be said to be systematic in two different senses. First, it is systematic in the sense that the speech performance of second-language learners is describable in terms of an ordered set of underlying rules, a grammar. Tarone(1985:375) notes that this system of rules may be variable.

*A variable rule may specify that Form A be used 60 % of the time in context x-y, and Form B be used 40 % of the time in the same context. Such a variable rule is nevertheless systematic, in that it correctly describes and predicts (in a statistical sense) what the learner will consistently do in the context x-y.*

An interlanguage may be viewed as a system of underlying rules, many of which are categorical and many of which are variable. Tarone (1985:374) puts it thus, "I do not, therefore, mean by 'systematic' that the second language learner's performance is not variable, it is. It is systematically variable".

Second, interlanguage is systematic in the sense of being permeable to invasion by other rule systems. In other words, it is systematic in that it has internal consistency. No linguistic system is completely systematic in this sense because all may incorporate elements of other rule systems from time to time. But, while there are limits to this permeability in native language, interlanguage may be unique in its permeability to invasion from other rule systems. An IL is thus less systematic than a native language in this second sense of the term. It has less internal consistency (see Tarone 1985).

The second axiom claims that the different styles produced by the learner in performing different tasks, may be ranged along a continuous dimension defined by the amount of attention to language form required by these tasks. Given that learner performance on different tasks at a single point in time will vary, Tarone (1985:375) hypothesizes that there is a direct relationship between attention to form required by a task, and grammatical accuracy on that task such that a monotonic function might be plotted between these two variable. She argues that it will vary systematically such that as a series of tasks requires

increasing attention to language form, the correctness of the various grammatical forms produced in performing those tasks will also increase. This relationship is illustrated in Table 4.1, where task C requires more attention to language form than task B, and task B requires more attention than task A.

	Task A	Task B	Task C
Grammatical Form 1	25 %	50 %	75 %
Grammatical Form 2	50 %	75 %	90 %
Grammatical Form 3	10 %	20 %	30 %

Table 4.1 Hypothetical “correct” production of morphological and syntactic forms in interlanguage (Tarone, 1985:376)

Based on the claims of this axiom, Tarone (1985:376) argues that:

*We would expect that Forms 1, 2 and 3 would all steadily increase or decrease in accuracy rate when the tasks are ordered in terms of the amount of attention to language form required. We would not expect that accuracy of production of Form 1 would decrease in correctness on Task B and then increase on Task C (25 % - 10 % - 75 %). Rather, as given tasks require increasing attention to language form, they should produce a gradually increasing (or decreasing) accuracy of scores on all the forms.*

Each IL style will contain some variable regularities and some categorical regularities. As learners move from one style to another at a single point in time, their linguistic behaviour may become either more categorical or more variable, as Table 4.2 shows.

	Style I	Style II
Grammatical Form 1	0 %	50 %
Grammatical Form 2	50 %	100 %

Table 4.2 Hypothetical changes in variability in IL (Tarone, 1985:376)

The hypothetical learner, in Table 4.2, has, as Tarone notes, moved closer to a target language goal in her use of both grammatical forms, but in the case of Grammmatical Form 1

a categorical regularity has become more variable and in the case Grammatical Form 2 a variable regularity has become categorical.

Therefore, in terms of the second axiom, the learner's IL capability is not assumed to be homogeneous (single-style) but rather heterogeneous, made up of a continuum of styles as figure 4.2 shows. Any linguistic system must be viewed as consisting of a continuum of styles (Tarone 1983:152). As figure 4.2 shows, the continuum consists of the vernacular style on the one end, the careful (superordinated) style, on the other, and the intermediate continuum of styles between the two ends.

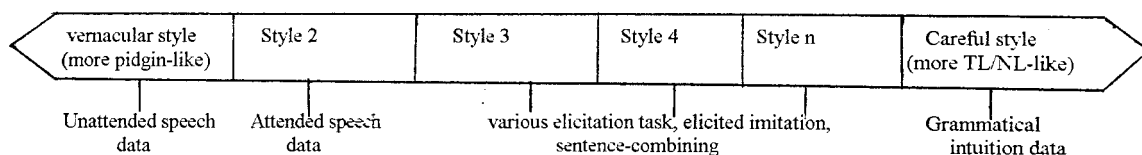


Figure 4.2 Interlanguage continuum (Tarone, 1985:152)

The third axiom hypothesizes the existence of a vernacular style, which Tarone (1983:152) defines as that style produced when the speaker pays the least amount of attention to language form as Figure 4.2 shows. The IL vernacular style is the least permeable to invasion by other rule systems, and so it can be argued that the IL vernacular norm is more systematic than the IL superordinate norm in the sense that the vernacular has greater internal consistency. Dickerson (1974:6) notes that:

*The IL vernacular is an internally consistent, but variable system. As a variable system, it is not characterized by categorical non-target output from its variable rules, although some rules may be categorical. But the system as a whole is expected to display a high but stable proportion of non-target rule output. This stable system forms the base line of variability.*

The fourth axiom claims that when a speaker pays more than the minimum amount of attention to speech, a careful (superordinate/formal) style is produced, as Figure 4.2 shows. This style is the most permeable to invasion by other rule systems, such as the target language (where there is overgeneralization of TL rules) and native language (where there is L1 transfer). So it can be argued that the IL superordinate norm is less systematic and more

variable than the IL vernacular norm in the sense that the superordinate style has less internal consistency.

The crucial question is: What sort of evidence is there that the superordinate and vernacular norms of IL differ significantly, and that the vernacular style is less influenced by other linguistic systems than the superordinate? This is an empirical question which can be answered by examining the utterances of second language learners in two situations: one in which they are paying minimal attention to speech form, and the other in which they are paying maximum attention to speech form (such as providing intuitions of grammaticality). "A comparison of the two sets of data should show style-shifting: It should be possible to describe the two sets of data, infer the underlying norms, and determine whether and how these differ," Tarone (1982:76-77). Of crucial importance here is how to distinguish formal from informal contexts. This brings us to the last axiom, namely, the best way to obtain enough and clear data.

The last axiom claims that the best way to obtain enough data on any speaker is through an individual tape-recorded interview: a formal context. The Observer's Paradox (see Tarone 1972:189) is this:

*We must observe and get clear data if we are to do research. We must be present in the room with the subject. And, the best data is recorded data – ideally with a microphone as close to the speaker's mouth as possible.*

Tarone argues that, if we get good recorded data, we get bad data in the sense that the speaker has focused attention on speech and "style-shifted" away from the vernacular, which is the most systematic IL style. Hence the so-called "Observer's Paradox" in which IL researchers are caught up. She concludes that it is only through longitudinal studies of IL in use in the informal context that researchers will ever be able to gain insights into the truly systematic nature of interlanguage. She uses the image of interlanguage as a chameleon to highlight the difficulty that researchers encounter in collecting good interlanguage data as follows:

*If we are to find the chameleon, we must separate him out from his surroundings, and we must be very clear as to what his surroundings were when we report our findings. And, we must attempt to capture him in the most natural, unguarded state (1979:190).*

However, she advises that elicitation devices and research in the classroom should not be discarded, as they obviously have their place. These devices are useful only as measures of formal language proficiency, but fall short as research tools which are supposed to elicit “vernacular” or “unmonitored” speech.

#### **4.2.2 The Acquisition Process**

As Tarone (1983:155) notes, the Capability Continuum Paradigm allows for two means of internalization of interlanguage. In one means, the learner spontaneously produces simple structures in the vernacular style. For example, sentences like

- (1) It's no my comb, and
- (2) Britta no this .... no have .... this .....

may be produced spontaneously by all second-language learners in their unattended speech, regardless of the native language or the target language involved (Tarone, 1983:155). She observes that some regularities may be produced earlier than others, so that a tendency towards a universal order of acquisition of such structures may be evidenced, particularly in the vernacular style.

The other means of internalization, Tarone (1983:155) observes, is the incorporation of a target language structure into the interlanguage by moving from the careful style towards the vernacular style. This process is described by Hyldenstam (1978:6) as follows:

*We can expect a new rule-adjustment to the target – to appear first in data with a high degree of formality where the learner has an opportunity to monitor his performance. In time, the adjustment can be expected to spread to less formal types of performance, and in the last instance, it will show up in informal oral production.*

There are, however, not enough longitudinal data at present to show this sort of movement actually taking place. The Capability Paradigm would account for the movement by predicting that while TL structures move over time from careful style towards the

vernacular, as part of the process of acquisition, those IL structures which spontaneously appear in the vernacular style would gradually be replaced by them (Tarone, 1983:155).

### **4.3 The Variable Competence Model of SLA**

In his paper, "A variable competence model of SLA," Ellis (1985a:47) proposes a model of SLA which, as he puts it, "takes full account of the variability of IL. Since the model is a process model, Ellis explains, it describes three inter-related sets of processes involved in SLA. These are, first, the processes by which the language user's output helps to form 'input', for the language learning mechanism ; second, the processes of internalizing new knowledge from the input, and third, the processes of production and reception. In this paper Ellis describes the components of the model and summarizes its main hypotheses. He then reconsiders what he calls five central issues in SLA research.

In outlining the model, Ellis distinguishes between the product and the process of acquisition. He defines the concepts, the product refers to what the learner does with the language, the discourse which he helps to construct, and the process refers to both how the learner internalizes L2 knowledge and to how he uses this knowledge in performance – the strategies of learning and use which comprise the 'black box'. In other words, the product is the observable result of the processes, and it constitutes, as Ellis (1985:49) puts it, the main source of information about the nature of the processes involved.

#### **4.3.1 The Product of SLA**

Ellis views the product in terms of what he calls the discourse continuum. He perceives the discourse to range between an unplanned and a planned pole. Unplanned discourse lacks forethought and has not been organized in advance, and is most evident in spontaneous communication, where the learner is focused on getting his meaning across. Planned discourse is that which has been organized prior to expression, and is most evident in transactional writing where the learner is concerned not only with content but also with expression. Ellis (1985c:87) notes that the continuum closely parallels Tarone's vernacular/careful continuum.

However, as Ellis (1985a) observes, the discourse continuum cuts across the medium of communication. By this he means that Unplanned discourse may be more likely in speech but can also be found in writing, while Planned discourse may be more likely in writing but can also be observed in speech. In other words, the type of discourse that arises will depend on socio- and psycholinguistic factors. For example, formal situations are likely to require Planned discourse and informal situations, Unplanned discourse. In brief, Ellis views the discourse continuum as a stylistic continuum.

The discourse continuum is of central importance in this variability model. As Ellis (1985a) explains, it accounts for the fact that L2 learners produce output that manifests one rule on one occasion and a different rule on another occasion. Ellis calls this discourse sliding and as he observes, is similar to what Selinker (1972) calls “backsliding.”

#### **4.3.2 The Process of SLA**

Ellis (1985b:118) notes that, “following Corder (1977), it is possible to identify both a horizontal and a vertical dimension to interlanguage”. The horizontal dimension refers to the interlanguage that a learner has constructed at a specific point in time, while the vertical dimension refers to the developmental stages through which the learner passes over time. “The Variability Model takes as axiomatic that horizontal variability (i.e. the variation evident at a single stage of development) mirrors subsequent vertical development (i.e. the interlanguage continuum) (Ellis, 1985a:48). To support this, he cites Widdowson (1975:195), who notes that “change is only the temporal consequence of current variation”. The process of use/acquisition can, therefore, in Ellis’ view, be best examined if the overall picture is broken into its competent parts, thus: the nature of L2 knowledge, the procedures of language use, and the use = acquisition equation. Each of these is considered below.

##### **4.3.2.1 The Nature of L2 Knowledge**

The learner’s L2 knowledge is variable, and the variability is of two types: non-systematic variability and systematic variability. In the former, linguistic alternates occur in free variation, that is, the learner possesses two or more forms which he uses to communicate the same meanings. In other words, Ellis (1985c:85) notes, in order to detect free variation in interlanguage, it is necessary to look at form-function relationships to investigate which

forms are used to express which meanings. However, as he observes, there are few SLA studies that have investigated these relationships.

In systematic variability, Ellis (1985a:48) notes, variants are used on a regular and predictable pattern. This regularity can be traced to situational factors to do with the nature of the linguistic environment in which the variants are used (when it is possible to talk of linguistic variation studies).

Ellis (1985a:48) argues that it is possible to relate these various types of L2 knowledge to the discourse types as described above. He claims that non-systematic knowledge will be more evident in unplanned discourse than in planned discourse, whereas systematic knowledge will be evident throughout the discourse continuum, but some variants will be more closely associated with the unplanned end of the discourse continuum and other variants with the planned end.

Furthermore, Ellis (1985a:48) claims that because unplanned discourse requires instant access to linguistic knowledge and as such places considerable processing burden on the learner whose L2 repertoire is limited, one solution to this is to ease the burden by memorizing by heart whatever forms come most easily by heart. Thus by storing forms as alternates in free variation the learner simplifies his task by avoiding having to choose from among the forms available to him in an orderly manner. In contrast, Ellis (1985a:48) notes, because planned discourse requires careful organization, it gives the learner time to search through his repertoire to locate the appropriate form. The learner is, therefore, more likely to rely on systematic knowledge, selecting those variants that maximize his competence.

In fact, as Ellis (1985a:48) notes, systematic knowledge is organized both stylistically and linguistically. In stylistic variation the variants that have been acquired early will occur in unplanned discourse because they will have had more practice and so be more fully automatized, while those variants that have been acquired more recently will be restricted initially to planned discourse. In linguistic variation, unplanned discourse will manifest forms in those linguistic environments in which they were initially acquired, while planned discourse will manifest the same forms in a fuller range of linguistic environments, including those that the learner has recently mastered.

Ellis (1985a:49) gives an example to illustrate how the two types of L2 knowledge relate to the discourse types. Firstly, if a learner possesses the following three forms in his interlanguage:

- (1) v + ing,
- (2) v simple form, and
- (3) v + s

Initially these exist as alternants (i.e. non-systematic knowledge) and are used haphazardly in unplanned discourse. Ellis (1985a:49) points out that utterances like the following will be observed:

- (1) My brother living in London
- (2) My brother live in London
- (3) My brother lives in London

Let us now imagine a learner has these forms as variants (i.e. they become part of his systematic knowledge) and their use is now governed by rules. One rule might enable the learner to distinguish progressive from habitual activity, enabling him to produce utterances like 1 when he wishes to encode progressive activity and utterances like 2 and 3 for habitual activity. However, Ellis (1985a: 49) argues, initially he may only be able to apply this rule in planned discourse. Also there may be linguistic restrictions on the application of this rule. The learner may be able to use V + S in one linguistic context (e.g. after a third person pronoun) but not in other linguistic contexts (e.g. after a noun phrase). Furthermore, as Ellis (1985a) points out, it is likely that he will master the contexts he finds more difficult in planned before unplanned discourse.

To explain these phenomena, Ellis appeals to Labov's (1970:208) proposal that the choice of speech style can be measured by the amount of attention paid to speech, and that the most important way in which attention is exerted is by 'audio-monitoring one's own speech'. Accordingly, Ellis' view is that unplanned discourse occurs with little or even no audio monitoring by drawing on non-systematic knowledge or those variants in systematic knowledge, which can be processed easily and spontaneously. In contrast, planned discourse is seen to require considerable audio-monitoring, as it draws on those variants in

systematic knowledge that are 'deep' and so have to be searched for. In other words, the more the learner monitors his language, the more planned the resulting discourse will be and the more likely he is to use his maximal knowledge of linguistic rules or, in Ellis' (1985a:49) terms, to 'perform his competence'.

Although Tarone's model is similar to the Variable Competence Model in that both are based on a single heterogeneous competence, the Capability Paradigm appears to consider regular interlanguage behaviour (that is, systematic variability) only. Irregular behaviour (that is, non-systematic variability) is discounted as part of performance rather than competence. In contrast, the Variable Competence Model sees non-systematic variability as the product of alternates that are part of the learner's competence.

The closest account of L2 knowledge to that proposed in the variable competence Model is to be found in Bialystok (1982) in section 3.3.1, for the reason that Bialystok recognizes the importance of acknowledging two dimensions rather than one dimension of L2 knowledge. There is an automatic and analyzed factors. The former refers to the relative access the learner has to L2 knowledge (easily retrieved knowledge is automatic, knowledge retrieved with difficulty is non automatic), whereas the latter refers to the degree to which the learner has assigned a propositional mental representation which makes clear the structure of the knowledge and its relation to other aspects of knowledge." These two factors, as Ellis (1985a) notes, seem to correspond fairly closely to the distinctions proposed in the variable competence model. The analyzed factor is similar to the non-systematic distinctions, while the automatic factor matches the stylistic and linguistic continua of the systematic knowledge.

To summarize Ellis' account of L2 knowledge, he regards the learner as credited with a single heterogeneous knowledge store which can be thought of as consisting of four cells (as in figure 4.3), each representing a particular type of knowledge. In cell A and B the knowledge is non-systematic or only partly analyzed. Cell A differs from cell C in terms of how automatic this knowledge is. In cells C and D the knowledge is systematic and analyzed to a high degree. Again cell C differs from cell D in how automatic this knowledge is. As Ellis (1985a:50) notes, unplanned discourse typically draws on cell B and planned discourse on cell D, but facility in these two types of discourse is also a reflection of how automatised L2 knowledge is.

A	B
Automatic analysed L2 knowledge	Automatic ananalysed L2 knowledge
C	D
Non-automatic analysed L2 knowledge	Non-automatic unanalysed L2 knowledge

Degree of systematicity of L2 knowledge

Fig 4.3      Types of knowledge [adapted form Ellis, 1985a:50]

#### 4.3.2.2 Procedures of L2 Use

There are different procedures for constructing discourse and they correspond to the various types of L2 knowledge. These are of two basic types, which Ellis (1984) refers to as primary and secondary processes. Primary processes are seen to be responsible for engaging in unplanned discourse in that they draw on knowledge that is relatively unanalyzed, including non-systematic knowledge. Secondary processes are seen to be evident in planned discourse, and to draw on knowledge towards the analyzed end of the continuum. The terms ‘primary’ and ‘secondary’ have been chosen to reflect the primacy of unplanned discourse in communication. That is, the ‘primary’ processes are part of everyday language use, whereas the ‘secondary’ processes are the products of developed cognitive abilities.

Primary processes consist of simplification and complexification processes. As Ellis (1985a:51-52) argues, simplification processes enable the learner to reduce the learning and processing burdens while complexification processes enable the learner to “fillout” his competence and expand his range of use by identifying and calling upon increasingly more subtle means for distinguishing meaning. Examples of simplification are functional and semantic simplification, pattern use and vertical extension and examples of complexification are semantic expressiveness and theoretical expressions.

Secondary processes consist of monitoring and borrowing. Monitoring (a term used by Krashen, 1981 - see section 3.2.1.2) is seen to refer to the conscious editing and correcting of utterances.

Ellis (1985a:52) challenges Krashen's position that monitoring draws on a separate knowledge source (i.e. learnt knowledge) as unnecessary. Instead, Ellis perceives monitoring as involving the learner searching through his linguistic repertoire in order to locate the form which he considers most appropriate or correct for use in a particular situation or context. Monitoring is seen to make use of knowledge at the analyzed end of the continuum. Monitoring can take place readily if this knowledge is automatic and more slowly if it is non-automatic. 'Borrowing' is a term used by Corder (1981) to account for the deliberate use of the learner's first language. When the learner finds that he lacks an L2 resource, he is left with the choice of either aborting or utilizing alternate means, such as constructing a message in the L1 and then 'translating' it. Translation is seen to involve a careful search for the most appropriate or correct form. Both borrowing and monitoring are perceived as means by which the learner can maximize his competence by searching for and using rules that are not immediately available (Ellis, 1985a:52).

Each set of primary and secondary processes has an external and an internal representation, which can be referred to as discourse and cognitive processes respectively. For example, the primary process - functional simplification - has an external representation (discourse process) in which a given language function is expressed using any approximately appropriate form, assuming that the hearer will infer what function is intended. It also has an internal representation (cognitive process) in which forms that are frequent in the input are attended to, memorized, stored as alternants (that is, not coded for function except in the most general terms) and selected randomly (that is, whatever form comes most immediately to hand is selected). This notion of discourse and cognitive processes applies to the entire set of primary as well as secondary processes (Ellis 1985a:52).

Although primary and secondary processes explain how the learner activates knowledge in different types of use, Ellis (1985a:52) posits that they can also explain how acquisition takes place. He calls this "the use = acquisition equation", which assumes a relationship

between language use and language acquisition. This relationship is examined in the next section.

#### 4.3.2.3                    **The Use = Acquisition Equation**

With regard to the relationship between language use and language acquisition, Ellis (1985a:52) cites three instances in which this relationship is evident. In the first instance, Ellis argues that because language use can be seen as the matrix in which linguistic knowledge is created, the procedures that the learner employs in using L2 knowledge are also the means by which new L2 knowledge is internalized. In support of this, Ellis cites Widdowson (1984) who argues that new linguistic rules are the result of using acquisition equation in communication:

*We draw upon our knowledge of rules to make sense. We do not simply measure discourse up against our knowledge of pre-existing rules, we create discourse and commonly bring new rules into existence by so doing. All competence is transitional in this sense (Widdowson, 1984:62).*

In other words, language acquisition is the result of our capacity to make sense. As Ellis (1985a:52) puts it, “new rules come into being as a result of constructing new frames of reference in specific contexts of use”. The procedures that are employed to achieve this are the means by which linguistic knowledge is created. Such procedures consist of primary and secondary processes.

Primary processes of simplification ease the burden placed on the language processing mechanisms due to minimal L2 knowledge. As Ellis (1985a:52) points out, they enable the learner to exploit his world knowledge, the previous discourse and his ability to memorize chunks of speech in order to avoid both detailed analysis of the linguistic input and the need to search for specific forms.

Primary processes of complexification that lead to semantic and rhetorical expressiveness are used later, when the learner is able to process input data of a more complex nature. Ellis (1985a:52) points out that, even when this stage is reached, the use of simplification

processes does not disappear, as the learner continues to use them whenever there is need to resort to simplified register of facilitate communication.

The use of secondary processes is seen to offer an alternate route of development which enables the learner to produce planned discourse evidencing knowledge that may not be available for use by the primary processes until much later. The primary and secondary processes are employed in using L2 knowledge and in internalizing new L2 knowledge. In Ellis' (1985a) viewpoint, this is one of the three instances in which the use = acquisition equation is evident.

Secondly, the use = acquisition equation is evident in form-function mapping. As Ellis (1985a : 52) points out, "non-systematic knowledge functions as an important mechanism of development as it represents an unstable condition of interlanguage". Functional simplification is one of the early processes of development. Initially, interlanguage knowledge consists of alternants. L2 knowledge is not organized systematically. As Ellis (1985a:52) explains, non-systematicity is necessary in order to facilitate use in unplanned discourse straight away. However, Ellis (1985a:52; 1985b:126; 1985c:95) argues that the existence of non-systematic knowledge is unstable and is always a precursor of systematic knowledge. In other words, the presence of alternants (i.e. forms in free variation) creates a redundancy of knowledge, which is inefficient, and this is seen to run counter to what Ellis (1985a:53; 1985b:126) calls "the Economy Principle of Linguistic Organization." This principle, as Ellis points out, states that ideally a linguistic system contains enough but no more distinctive features than are required to perform whatever function the user wishes to communicate. As a result, the learner will try to improve the efficiency of his interlanguage, and thereby eliminate from the system forms that ultimately cannot be sorted out into appropriate functional pigeonholes. Functional simplification, which is a procedure for L2 knowledge use, is a mechanism for L2 knowledge development in that it leads to an unstable interlanguage condition.

The third instance of evidence for the use = acquisition equation is, as Ellis (1985a:52-53) points out, the fact that the horizontal variability of L2 knowledge reflects the creation of the interlanguage continuum and also provides an extra source of knowledge. The variability continuum is related to the interlanguage continuum in that horizontal variability (i.e. development at a specific point in time) mirrors vertical development (i.e. development

overtime). This is true of the variability that can be traced to both linguistic and situational factors. For example, the systematic use of variants according to their linguistic environment parallels the gradual development of competence as the learner masters the forms he has internalised in one context after another. Those linguistic environments can be arranged developmentally to correspond to the horizontal continuum in which the use of the variants in different contexts is governed by the degree of attention paid by the learner. Similarly, the systematic use of variants according to situational factors matches their development over time. Linguistic forms derived from the application of secondary processes in planned discourse take time to 'spread' along the continuum in the direction of an unanalyzed representation so that they can be used via primary processes in unplanned discourse later. Horizontal variability provides evidence that language use is related to language acquisition; that "it serves as a pull-mechanism by which analyzed knowledge develops a representation that makes it accessible in unplanned discourse (Ellis, 1985a; 1994).

### 4.3.3 Principles of SLA

The Variable Competence Model as described above is a theory of both language use and language acquisition, which are two sides of the same coin, as the schematic representation in figure 4.4 shows.

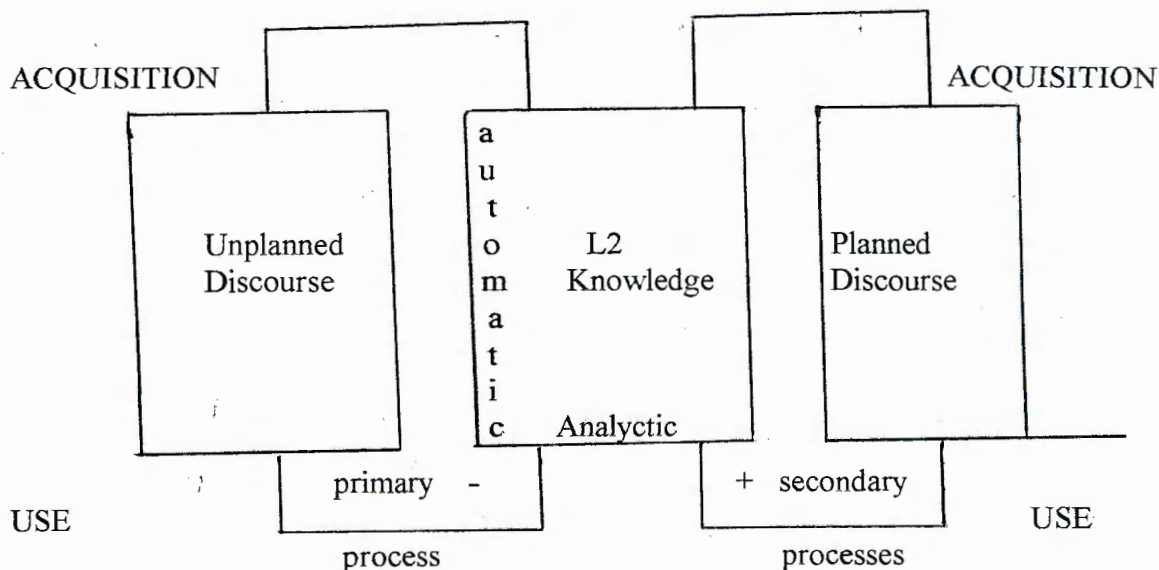


Fig 4.4 Variable Competence Model of SLA (Ellis, 1985a:54)

Ellis (1985a:54) points out that the Model can be summarized as a series of hypotheses. The first hypothesis states that the learner's L2 knowledge is comprised of knowledge that varies both in terms of how analyzed and how automatic it is. The second one posits that the L2 learner possesses two types of procedures for actualizing his knowledge. Hypothesis three states that L2 performance is variable as a result of different types of L2 knowledge and different processes for using this knowledge. As Ellis points out, this variability can be described in terms of the discourse continuum (unplanned – planned discourse). The fourth and final hypothesis states that acquisition is the product of language use. Thus, this model embraces both language use and language development.

#### **4.4 A Critique of the Capability Continuum and the Variable Competence Models**

In the previous chapter, the dilemma of whether or not a relationship exists between explicit and implicit knowledge, was discussed. The divergency and conflict between the interface and the non-interface perspectives showed that there is still considerable disagreement amongst theorists regarding the relationship. This chapter has considered this relationship from a different perspective: a variability perspective.

The variability perspective perceives L2 learners knowledge not as an either-or dichotomy, but as a dynamic system which 'style-shifts' according to the degree of attention the learners are paying to linguistic form. Style-shifting occurs along a continuum ranging from a careful to a vernacular or casual style. The careful style is most evident in grammatical intuition data or planned discourse and the vernacular style is evident in spontaneous oral communication or unplanned discourse. According to this style, therefore, the L2 learner possesses a number of styles, not just two, as in the acquisition/learning dichotomy. This suggests that the Monitor Theory may not constitute an adequate account of the nature of interlanguage system. Variability is not an either-or phenomenon, but a continuous phenomenon. For instance, when tasks are ordered according to the degree of attention to linguistic form they require, accuracy levels in the use of specific linguistic forms vary continuously, with the highest levels evident in the learners careful style and the lowest levels in the vernacular style (Tarone & Parish, 1988). The careful style is most permeable to the influence of target language forms and the learner's L1. This perception of L2

knowledge variability is similar to Byialystok's version of L2 knowledge as a combination to different degrees of analytic and automatic, unanalytic and automatic, analytic and unautomatic, and unanalytic and unautomatic knowledge.

It is important to acknowledge that not all variability is systematic. There is also non-systematic variability which often precedes systematic variability. Ellis (1994) notes that systematic variability is a reflection of linguistic 'change', whereas non-systematic variability is present before change is initiated and serves as the resource for change. New forms constantly enter the interlanguage system because of its permeability. The new forms are used with existing ones in free variation to perform the same range of language functions. Later, free variation is replaced with systemic variation which, in turn, later gives way to the categorical use of chosen variation (Ellis, 1987:183). Variation is, therefore, significant for change in the process of L2 acquisition.

The variability perspective recognizes two forces that influence the process of change in interlanguage: normative pressures and structural pressures (Ellis, 1987:184). Normative pressures refer to the motivation to belong to the target language community and a strong desire to acquire those patterns of variability that characterize the target dialect of his contact group. This type of normative pressure can be referred to as 'social pressure'. Alternatively, normative pressure can derive from the authority and status inherent in institutional structures such as in classroom learning. This can be categorized as 'pedagogic pressure'. Learning continues as long as the learner acknowledges either social or pedagogic normative pressures and ceases when the learner is no longer open to such pressures. In this case the learner's interlanguage fossilizes in whatever state of variability it has reached at that point (Ellis, 1987).

Structural pressures arise through the introduction of new variants in an interlanguage system. The learner is led to maximize the efficiency of his system in order to communicate effectively. Structural pressures are learner internal and are the cause of the constant flux of interlanguage systems. The variability theory has important implications for L2 teaching, particularly in addressing the dilemma of accuracy-oriented and fluency-oriented teaching and these implications are discussed in Chapter 6.

## 4.5 Conclusion

In terms of Tarone's and Ellis' models, L2 knowledge is variable. Such variability is of two types, systematic and non-systematic. Ellis further distinguishes between automatic/non-automatic and analysed/unanalysed knowledge. Both models view IL output as lying on a continuum, ranging from careful to vernacular styles (Tarone) or from planned discourse to unplanned discourse (Ellis). Further, both theorists, in their respective approaches, explain the process of SLA. The manner in which they each perceive the nature of L2 knowledge, IL behaviour and the process of L2 acquisition, will have certain implications for formal interventions in the acquisition process, and these are discussed in chapter 6.