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**Simultaneous naturalistic acquisition of inflectional morphology
in two languages by adult learners: Three case studies**

Kiciuk, Maria, Ph.D.

City University of New York, 1988

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SIMULTANEOUS NATURALISTIC ACQUISITION OF INFLECTIONAL
MORPHOLOGY IN TWO LANGUAGES BY ADULT LEARNERS:
THREE CASE STUDIES

by

MARIA KICIUK

A dissertation submitted to the
Graduate Faculty in Linguistics
in partial fulfillment of the
requirements for the degree of
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1988

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ABSTRACT

SIMULTANEOUS NATURALISTIC ACQUISITION OF INFLECTIONAL MORPHOLOGY IN TWO LANGUAGES BY ADULT LEARNERS: THREE CASE STUDIES

by

Maria Kiciuk

Advisor: Professor Carlos Yorio

The purpose of this research is to investigate the role of the learner's first language and the principles of markedness in naturalistic adult second language acquisition. I propose to examine these issues by studying the interlanguage of three adult subjects whose native language is German and who have acquired two languages, English and Ukrainian, as adults without formal instruction. I hypothesize that the subjects' interlanguage will reveal differential success in the acquisition of inflectional morphology in the two languages under study. To explain the predicted differential success in acquiring the inflectional morphology in Ukrainian and English, I posit the Acquisitional Direction of Complexity and claim that the degree of complexity of the inflectional system in the learner's first language in relationship to the language being acquired is a crucial variable and a predictor of the degree of difficulty as well as the eventual proficiency in second language acquisition.

Additionally, I propose that markedness is an important factor in second language acquisition. I therefore claim that morphological structures in Ukrainian which are marked in terms of the "complexity principle" and "typological markedness" will be constrained by the principles of markedness and will be especially difficult to acquire.

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CHAPTER I

INTRODUCTION

There are only a handful of studies conducted with learners who have acquired a second language as adults under naturalistic conditions. The subjects in most of the studies in the field of second language acquisition (SLA) have received some type of second language instruction. Moreover, in many research investigations, naturalistic studies and studies under conditions of instruction are generally lumped together. Some SLA researchers, e.g. Perkins and Larsen (1975), Felix (1981) have stated that it is imperative to study naturalistic and instructed learners separately. We can then examine man's natural ability to learn a language and compare it with learning a language with the help of instruction. This type of comparison will make it possible for linguists to discover how different learning situations

affect the acquisitional process.

In addition, most of the studies in a noninstructional setting investigate the early stages of SLA in subjects acquiring English as a second language. These include longitudinal studies by Schumann (1976a, 1976b), Bruzese (1977) and Finkelstein (1980) of adult subjects whose interlanguage has fossilized at the basilar level of competence. Hanania and Gradman (1977), and Huebner (1979) also report on longitudinal investigations of adult uninstructed subjects, but, once again, they deal with the early stages of the subjects' acquisition of English as a second language. Schmidt (1983) describes a three-year study of an adult Japanese learner acquiring English under naturalistic conditions and reports that although his subject possessed communicative competence, his grammatical interlanguage was fossilized and very little progress was reported over the three-year period.

My study examines the production of three advanced adult learners who have acquired communicative competence not in one, but in two languages at the same time without the assistance of formal instruction. The purpose of studying their interlanguage production is to see what role the subjects' first language (L1) and the principles of markedness play in naturalistic adult SLA.

REVIEW OF RELATED LITERATURE

A great deal of interest has been generated in the field of language acquisition over the past few decades - child acquisition of the first language and second language acquisition by children as well as adults. Researchers have attempted to reveal the processes involved in acquiring a language to better understand how children normally acquire a first language and why second language acquisition, especially in adults, is frequently less successful. A number of studies have been written in the field of first and second language acquisition, but many issues remain unresolved and await further investigation.

First Language Acquisition

Several studies on the acquisitional process in the first language (Berko 1958, Cazden 1968, Brown 1973, and de Villiers & de Villiers 1973) had wide influence on further research development and were subsequently used as the basis for examining the SLA process. These investigations dealt mainly with inflectional morphology, one of the main fields of study in applied linguistics.

In her 1958 cross-sectional study of children acquiring English as their first language, Berko devised a new technique which laid the foundation for

many other studies. To empirically test out how children acquire inflectional morphology and to eliminate the possibility of rote memorization, she used nonsense words to analyze such morphemes as possessive and regular plural for nouns and the progressive, third person singular and regular past tense for the verbs. The results of her study indicate that children do not acquire inflections as part of the lexicon, but internalize morphological rules progressively, which they are then able to apply to new words. A Spanish version of the test, constructed by Kernan and Blount (1966), was used with Mexican-American bilingual children to investigate the acquisition of Spanish noun and verb suffixal systems. A French version, by Swain, Naiman and Dumas (1972) was used in Canada in French immersion schools to test the acquisition of morphological rules by children learning a second language. These studies indicate that children internalize rules of inflectional morphology in learning the first as well as the second language.

In the early 1970's language acquisition research enters a new phase. Some researchers, notably Cazden, Brown and de Villiers set out to discover the developmental sequence of the acquisition of inflectional morphology. In a well-known longitudinal study of three children acquiring English as their first

language, Brown (1973) investigated the developmental process of 14 morphemes. Since the acquisitional sequence of these morphemes correlated significantly among the three subjects, Brown concluded that there is an "invariant order" of acquiring morphological structures. His results were corroborated by de Villiers & de Villiers (1973) who investigated the same set of morphemes in a cross-sectional study.

Second Language Acquisition

SLA research has received a great deal of impetus from L1 research. It has closely followed its methodology and has investigated many of the same linguistic areas. The main focus in SLA research has been the analysis of the learner's language production. By studying the nature of the learner's language, researchers hope to intuit the learning process and to discover the factors which play a role in SLA.

One of the first attempts to propose a theoretical model of second language learning was Contrastive Analysis (CA) which sought to explain the learning process on the basis of similarities and differences between the native language and the target language. It was claimed that it is necessary to compare the linguistic systems of the two languages in such areas as phonology, morphology, syntax and lexicon, and on the

basis of such a comparison, one could predict in advance what sounds and structures the learner would find easy or difficult. Because of the shift from behaviorist to cognitive psychology and because the predictions of ease and difficulty of particular structures based on the comparison of L1 and L2 were not always correct, CA lost its reputation and was "replaced" by Error Analysis (EA).

Most proponents of EA (Corder 1967, Richards 1971, Selinker 1972, Dulay and Burt 1972, Bailey, Madden and Krashen 1974) do not discard L1 transfer completely, but believe that it has no predictive power and that its role in SLA is relative, if not negligible. They argue that L1 interference accounts for but a small fraction of errors, and that the majority of errors are intralingual, similar to errors made by children learning their first language. The presence of a large number of overgeneralization errors is seen as evidence that L1 and L2 learners employ similar strategies and participate actively in testing hypotheses about the target language. Grammatical errors therefore should not be considered simply as deviant forms, but should be perceived as the result of universal strategies employed by second language learners. These errors indicate that the learners pass through a series of developmental stages,

and that each stage is a closer approximation of the target language (Nemser 1971, Selinker 1972).

Using error analysis for empirical research, Dulay and Burt (1972) conducted a study analyzing the speech of children acquiring English as a second language. They discovered that the types of errors were very similar regardless of L1 background and thus did not result from negative L1 transfer. Based on these findings, Dulay and Burt proposed the Creative Construction model for SLA in children. The Creative Construction model is based on the premise that children possess universal innate mechanisms which operate in a similar fashion in both L1 and L2 acquisition and help the learner to formulate hypotheses about the language system to be acquired.

Various models have been advanced to explain the acquisition process in adults acquiring a second language and a number of different factors have been posited as crucial variables to explain varying degrees of success in adult learners. Of these Krashen's Monitor model (1977) and Schumann's Acculturation model (1978a, 1978b) have been widely debated and have achieved general acceptance in the literature on SLA.

A pivotal notion in Krashen's SLA model is his distinction between acquisition and learning, two different and distinct ways of input intake. In

Krashen's view, acquisition involves unconscious processes and constitutes the core of adult SLA, whereas learning, which consists of conscious processing of linguistic rules, plays but a minor role and serves solely as a monitoring or editing device. Krashen's input hypothesis (1981, 1982) relates crucially to acquisition and maintains that adult learners acquire a second language by having a rich source of meaningful and comprehensible input, which is a little more complex than the learner's present level of competence. Thus, adults acquire a second language in the same way children acquire their first language, not by conscious absorption of rules, but by receiving comprehensible language input and utilizing meaning-oriented communicative strategies.

Schumann's Acculturation model is based primarily on his longitudinal study of Alberto who made very little progress in acquiring English over a ten-month period. Schumann seeks to explain SLA by positing acculturation, which is comprised of such social and psychological factors as distance and/or proximity of the learner to the target language speakers, as the major causal variable affecting the level of second language achievement in adults acquiring a second language naturalistically. Thus, greater social and affective proximity of the second language learner to the target community will result in more successful acculturation

and language acquisition.

Related Research - L1 Transfer in SLA

Many linguists believe that the pendulum against CA has swung too far and that language transfer can manifest itself in various indirect ways, which are not easily discernible by EA. As Schachter (1974) points out, "What is currently viewed as evidence for the process of transfer is more appropriately viewed as evidence of a constraint on the learner's hypothesis testing process. It is both facilitating and a limiting condition on the hypothesis testing process." The strategy of avoidance described by Schachter is an indication that such a position has merit and that EA cannot in itself account for all second language learning problems. Thus, for example, the difficulties that Chinese and Japanese students experience in formulating relative clauses are not revealed in the number of errors they make, but in the fact that they produce a very small number of relative structures. This avoidance strategy can be predicted a priori by the use of CA, but it cannot be revealed by examining the students' errors.

Schumann (1979) and Zobl (1982) also give evidence of L1 influence in SLA. They point out that some interlanguage errors may have more than one source and may result from universal learning

strategies as well as L1 transfer. Such errors resist restructuring longer than errors which have only one source and, in addition, they might tend to fossilize. They also argue that if the process of simplification employed by learners in the early stages of language acquisition is reinforced by negative transfer from L1, the rate of acquisition is delayed.

Cancino (1976) reaches a similar conclusion in her comparison of two longitudinal studies (Cazden, Cancino, Rosansky & Schumann 1975, Hakuta 1976) in the acquisition of English as a second language by two five-year-old girls. She concludes that L1 transfer has an impact on the acquisition of English articles. Marta, a Spanish speaker, acquired articles much earlier than Uguisu, a speaker of Japanese, which, contrary to Spanish, has no articles.

Hakuta's (1974) longitudinal, naturalistic study of Uguisu, a Japanese five-year-old girl, indicates still another aspect of L1 transfer. Uguisu attains the possessive relatively early because of positive transfer, but, during the duration of the study, she does not reach Brown's acquisition criterion for plural, which is not morphologically marked in Japanese. This order contradicts the morpheme acquisition order found by other researchers. Hakuta therefore concludes that "it is

becoming increasingly clear that interference errors are not the only manifestations of the process of language transfer. As has been suggested by Uguisu's data, the order in which certain structures develop may very well depend on the L1 of the learner."

Jane Greene's study (1981) can also be cited in support of L1 transfer. She investigated the acquisition order of English morphology by adult subjects whose native language is not inflected and found that there was no significant correlation with orderings found in previous studies. For those subjects, however, who had learned French prior to the study, the acquisitional hierarchy of morphemes matched significantly with that in previous studies. She theorized that the learners who have not acquired an inflectional language face an additional acquisitional impediment when learning English, which she called the Conceptualization Barrier.

Markedness and SLA

The concept of markedness is closely allied to the theory of Universal Grammar which provides a general framework for both first and second language acquisition research. Central to the theory of Universal Grammar are the concepts of core and periphery. Unmarked rules constitute the core grammar and are learned on the basis

of a small number of examples, whereas marked forms have a limited distribution and require more evidence to be learned since the learner cannot assume a priori that they are part of the language (Chomsky 1981a, 1981b). As a result, the markedness hypothesis predicts that unmarked forms are acquired before marked forms.

Another criterion for markedness is the "complexity principle" (Greenberg 1966) in which linguistic complexity is viewed as the addition of rules, features or morphemes. This definition of complexity finds support in psycholinguistic research (Clark 1973) which shows that more complex forms require a little more time to be processed. Thus, it is predicted that the more complex a given structure is, the more marked it is and the more difficult to acquire.

The theory of markedness has been used to explain L1 development (Jacobson and Halle, for example, 1956) and has been incorporated to some extent in SLA, especially at the level of phonology, morphology and low-level syntax.

Eckman (1977) uses markedness in conjunction with the theory of contrastive analysis. He argues that "the main principle behind the Contrastive Analysis Hypothesis, namely that the comparison of the native and target languages is crucial in predicting the areas of difficulty that a language learner will have, can

be maintained as a viable principle of second language acquisition." He emphasizes, however, that it should be revised to incorporate some principles of universal grammar, namely the notion of "relative degree of difficulty" which corresponds to the notion of "typological markedness". He defines markedness as:

A phenomenon A in some language is more marked than B if the presence of A in the language implies the presence of B; but the presence of B does not imply the presence of A.

Eckman claims that the combination of the two approaches, i.e. markedness and contrastive analysis, which he calls the Markedness Differential Hypothesis, will make it possible to predict not only areas of difficulty in SLA but also degrees of difficulty.

Whereas Eckman applies markedness to L1 transfer, Rutherford (1982) extends its application to L2 developmental research. He reanalyzes three different studies (Fathman 1975, Dulay and Burt 1978, Hakuta 1979) and explains the order of acquisition, which was heretofore unaccounted for, by resorting to markedness concepts.

Bardovi-Harlig (1987) examines the acquisition of preposition stranding by adult second language learners in terms of the markedness hypothesis. She reports that preposition stranding, which is considered to be the

marked form, is acquired before preposition pied piping, its unmarked counterpart. She therefore suggests that in addition to the principles of markedness, salience, which she defines as the availability of data, plays an important role in the order of acquisition in second language learning.

RATIONALE FOR THE PRESENT STUDY

The purpose of this study is to examine the acquisition of and the proficiency in the inflectional systems of trilingual adult native speakers of German who have acquired two second languages (Ukrainian and English) simultaneously and naturalistically. Very little work has been done on adult trilinguals and on the relationships among the various linguistic systems acquired by these learners. There are several case studies of simultaneous child acquisition of two languages, but no descriptions of adults who have acquired two second languages at the same time in a naturalistic setting. To my knowledge, this is the first attempt to investigate trilateral morphological relationships in naturalistic adult language learners. Moreover, most of the studies in SLA describe the acquisition of English, a language with a relatively impoverished inflectional system. In order to broaden our views on L2 acquisition, we need to look at various

languages, especially those which have extensive declensions and conjugations in order to arrive at rules of more general validity and to have a better understanding of how we acquire second languages.

RESEARCH HYPOTHESES

This study will investigate the notion that L1 is a significant variable and a predictor of success in adult SLA. It will also test the explanatory power of the principles of markedness in acquiring a second language. My research hypotheses are as follows:

1. The Acquisitional Direction of Complexity i.e. whether a learner of a given native language goes to a more or a less complex linguistic system is a crucial variable and a predictor of the degree of difficulty as well as the eventual proficiency in SLA. I will claim that the main principle of Contrastive Analysis, the notion of prediction on the basis of L1 transfer, can be used not only with individual structures, but with entire inflectional systems and that certain predictions can be made based on the relative complexity of the two systems. Thus, the Acquisitional Direction of Complexity will have a facilitating or an impeding effect on the acquisition of inflectional morphology of the target language. ADULT LANGUAGE LEARNERS WILL FIND IT MORE DIFFICULT TO GO FROM A LESS

COMPLEX TO A MORE COMPLEX INFLECTIONAL SYSTEM. CONVERSELY, GOING FROM A MORE COMPLEX TO A LESS COMPLEX SYSTEM WILL BE RELATIVELY EASY. German speakers will therefore experience greater difficulties acquiring Ukrainian inflectional morphology, which is more complex than German, than they will acquiring the English morphological system, which is less complex than German. As a result, their output, both oral and written, will contain a greater number of errors in Ukrainian than in English. As will be shown, final achievement cannot be accounted for by functional or sociolinguistic factors of use.

2. My second research hypothesis will deal with the theory of markedness and will be based on the subjects' production data in Ukrainian. I will claim that SOME FORMS OF THE MORPHOLOGICAL SYSTEM IN UKRAINIAN WILL BE MORE DIFFICULT TO ACQUIRE BECAUSE THEY ARE MARKED IN TERMS OF THE "COMPLEXITY PRINCIPLE" AND "TYPOLOGICAL MARKEDNESS". It is thus predicted that the subjects will exhibit a greater number of errors in the structures which are marked.

I will especially investigate the following:

a. Morphophonemic alternations which are determined by certain morphological categories and which involve palatalization of velars. The so-

called Second Palatalization changes [k,h,x]* to [c,z,s] in the locative case in singular. The First Palatalization changes [k,h,x] to [č,ž,š] in the vocative case.

b. Vowel alternations between [i ~ o] and [i ~ e] as well as vowel deletions which are prevalent in some noun paradigms.

The analysis of markedness in this study is based on two criteria. The first criterion involves the complexity principle which defines markedness in terms of addition of features, morphemes or linguistic rules. Thus, the structures under study in this research involving areas of special difficulty, i. e. palatalization, vowel alternations and vowel deletion are marked because they possess an additional rule which changes consonants and changes or deletes vowels in certain linguistic environments. The second criterion is cross-linguistic or typological, as defined by Eckman. According to this criterion, the presence of marked forms presupposes the presence of unmarked forms. Thus, structures involving palatalization, vowel alternations and vowel deletion are marked by virtue of typological distribution, i.e. there are languages whose inflectional systems are not characterized by palatalization, vowel

*For consistency and comparability, all morphological units will be placed within [] regardless of the level of analysis that the symbols represent.

alternations and vowel deletion; there are also languages which possess both regular structures and forms undergoing the aforementioned sound changes, but there are apparently no languages which possess only palatalized forms or forms with vowel alternations and vowel deletion. Thus, the presence of palatalization, vowel alternations and vowel deletion implies that the language also contains forms which do not undergo these sound changes.

SUBJECTS

The subjects for this study are three women whose native language is German and who have acquired Ukrainian and English as adults. They have acquired the two languages simultaneously and naturalistically through communicative need and interaction with native speakers of Ukrainian and English after arriving in the United States and marrying Ukrainians. Thus, they are now trilingual and have been using all three languages, but especially English and Ukrainian, for the past thirty years. We can therefore assume that their linguistic systems are stabilized.

The motivating force behind their language learning was both integrative and instrumental. They married Ukrainians and wanted to be part of the Ukrainian community. At the same time, they needed English

since they intended to stay permanently in the United States. Their motivation, therefore, for learning both English and Ukrainian was very strong.

None of the subjects has received any formal instruction in Ukrainian. Two of the subjects had received minimal instruction in English in a school setting a few years prior to immigrating into an English-speaking environment. The third subject had no instruction in English, but is attending college at the present time and is taking English as part of the college requirements. They have mastered Ukrainian with the help of their husbands and friends, and have learned English by living in an English-speaking environment. They have acquired all four language skills in both languages, although their writing skill in Ukrainian is not as well developed as the other skills.

All three subjects have become fully integrated members of the Ukrainian and American community with resulting close social and psychological proximity to target language speakers. They participate in American and Ukrainian religious, social and cultural institutions and their friends are predominately Ukrainian-speaking and English-speaking adults. Their ties to the Ukrainian community are, in fact, especially close

since they have become active members of Ukrainian American organizations and community life. They use both Ukrainian and English on an every day basis. They use Ukrainian with their husbands and other family members (their children are either bilingual - Ukrainian and English, or trilingual - Ukrainian, English and German) as well as their many Ukrainian American friends. They use English on the job and in the English-speaking environment.

Thus, the subjects have several common characteristics:

1. They have the same native language (German), and have acquired the same two languages (English and Ukrainian).
2. They have acquired two languages simultaneously past the biological critical period.
3. They have acquired both receptive and productive skills.
4. They have acquired the two languages in a naturalistic setting through mere exposure, without any significant formal instruction.
5. They have become accepted and active members of the Ukrainian and American communities and use both Ukrainian and English on an every day basis.

Due to the similarities in the way the subjects have

acquired the two languages under study as well as similarities in the subjects' functional use of the two languages, any differences in their eventual acquisition of and proficiency in Ukrainian vs. English must be accounted for by linguistic factors.

CHAPTER II

COMPARISON OF THE INFLECTIONAL SYSTEMS IN ENGLISH, GERMAN AND UKRAINIAN

Ukrainian is one of the most highly inflected languages in the Indo-European language family, and inflectional suffixes can be added to such parts of speech as nouns, pronouns, adjectives, numerals, quantifiers and verbs. Syntactic relationships, expressed mainly by word order and the use of prepositions in English are indicated by inflectional morphology. The nominal system, for example, possesses singular and plural, three genders: masculine, feminine and neuter, and seven cases. All of these are signaled by a variety of inflectional morphemes since different affixes are used in different declension classes. Because the nominal system is especially rich in grammatical inflections, I intend to

focus my study on this aspect of the language. It also provides a good example of the difference in morphological complexity in the three languages under study. In addition, some of these morphemes have been studied extensively by researchers in both first and second language acquisition and can therefore be compared cross-linguistically.

Gender in Ukrainian is determined semantically to a certain degree, but most of the time there is no semantic correlation between the noun and its gender. Thus, names of males and females are always masculine and feminine respectively and names of small or young beings are generally neuter. Inanimate and abstract nouns, however, can be masculine, feminine or neuter and have no semantic basis for the gender they possess. In general, masculine nouns in the nominative are word stems ending in a consonant, feminine nouns end in the suffix [a] or [ja] and neuter nouns have the suffix [o], [e], or [ja] following a double consonant, e.g.

<u>Masculine</u>	<u>Feminine</u>	<u>Neuter</u>
čolovik 'man'	žink-a 'woman'	dyt-ja 'child'
dim 'house'	škol-a 'school'	derev-o 'tree'
kamin' 'stone'	stel-ja 'ceiling'	sonc-e 'sun'
		voloss-ja 'hair'

The adjectival declensional system has no syntactic role, but plays a purely formal function as means of agreement in gender, number and case between the adjectives and the nouns they modify. Also, adjectives possess their own sets of inflections and their phonological forms rarely coincide with the noun endings. The following examples illustrate gender agreement between nouns and adjectives:

	<u>Singular</u>			<u>Plural</u>
<u>Masculine</u>	<u>Feminine</u>	<u>Neuter</u>	<u>All genders</u>	
harn-yj obraz	harn-a xata	harn-e selo	harn-i obrazy/ xaty/sela	
'a nice picture'	'a nice house'	'a nice village'	'nice pictures/ houses/villages'	

German also possesses gender which is morphologically differentiated. In contrast to Ukrainian which has no articles, German possesses both definite and indefinite articles. Moreover, the articles are inflected for gender, case and number. Gender, for example, is indicated as follows in the article system:

	<u>Singular</u>		
	<u>Masculine</u>	<u>Feminine</u>	<u>Neuter</u>
Definite	der	die	das
Indefinite	ein	eine	ein

As in Ukrainian, masculine and feminine genders denote males and females respectively, but the gender of

inanimate things is semantically arbitrary, e.g.

<u>Masculine</u>	<u>Feminine</u>	<u>Neuter</u>
der Sohn 'son'	die Mutter 'mother'	das Kind 'child'
der Tisch 'table'	die Sonne 'sun'	das Land 'land'
der Brief 'letter'	die Eiche 'oak'	das Auge 'eye'

The interaction of case in German articles and nouns, taken all-in-all, increases the morphological complexity of German in the direction of Ukrainian. This complexity of German, however, appears to be of little total use to a German learner of Ukrainian, since the latter lacks equivalents of the German determiners.

In English, the grammar of gender is greatly simplified. While the gender of humans is generally determined by sex, inanimate objects are mostly neuter. Moreover, gender in nouns is never marked by inflectional suffixes. The only manifestation of gender in English is in the pronoun reference (Tom - he; Mary - she; table - it).

The following chart summarizes morphological gender distinction in nouns and adjectives in the three languages:

<u>Ukrainian</u>	<u>German</u>	<u>English</u>
Masc. dobr-yj čolovik	der gut-e Mann	the good man
Fem. červon-a kvitk-a	die rot-e Blume	the red flower
Neut. velyk-e ližk-o	das gross-e Bett	the big bed

The Ukrainian language expresses the relations between words in a sentence mainly by inflections, i.e. the nouns take different endings depending on their function in the sentence. Some types of relations are indicated by inflectional suffixes alone, and others by suffixes and prepositions. There are seven cases in Ukrainian performing various syntactic functions, some of which are indicated in the following chart:

Name of case	Function	Example
Nominative	a. Subject	Kit nadvori 'The cat is outside'
	b. Predicate	Ce mij kit 'This is my cat'
Genitive	a. Possessive	Šerst kota bila 'The cat's fur is white'
	b. Partitive	Tam je bahato kotiv 'There are many cats'
	c. Direct object with negatives	Ja ne baču kota 'I don't see the cat'
Dative	Indirect object	Daju kotovi moloko 'I am giving the cat milk'
Accusative	Direct object	Ja baču kota 'I see the cat'
Vocative	Direct address	Kote! 'O, cat'
Instrumental	After the preposi- tion 'with'	Bavljusja z kotom 'I am playing with the cat'
Locative	After the preposi- tion 'on' and 'in'	...na kotovi 'on the cat'

German has four cases: nominative, genitive, dative and accusative. Articles, nouns, adjectives and pronouns take different inflectional endings depending on the case.

The following chart compares the case systems in Ukrainian, German and English:

<u>Ukrainian</u>	<u>German</u>	<u>English</u>
<u>Singular</u> - <u>Masculine</u>		
N. dobr-yj čolovik	der gut-e Mann	the good man
G. dobr-oho čolovik-a	des gut-en Mann-es	the good man's
D. dobr-omu čolovik-ovi	dem gut-en Mann-(e)	
A. dobr-oho čolovik-a	den gut-en Mann	
V. dobr-yj čolovic-e		
I. dobr-ym čolovik-om		
L. dobr-omu čolovik-ovi		
<u>Singular</u> - <u>Feminine</u>		
N. harn-a žink-a	die schön-e Frau	the pretty woman
G. harn-oji žink-y	der schön-en Frau	the pretty woman's
D. harn-ij žinc-i	der schön-en Frau	
A. harn-u žink-u	die schön-e Frau	
V. harn-a žink-o		
I. harn-oju žink-oju		
L. harn-ij žinc-i		

Singular - Neuter

N. mal-e šatr-o	das klein-e Zelt	the small tent
G. mal-oho šatr-a	des klein-en Zelt-es	
D. mal-omu šatr-u	dem klein-en Zelt-(e)	
A. mal-e šatr-o	das klein-e Zelt	
V. mal-e šatr-o		
I. mal-ym šatr-om		
L. mal-im šatr-i		

All three languages (Ukrainian, German and English) possess singular and plural paradigms which are signaled by inflectional endings. Ukrainian, however, is more complex than German and even more so than English as the following examples show:

Plural

Ukrainian

N. dobr-i čolovik-y/žink-y/šatr-a
G. dobr-yx čolovikiv/žinok/šater
D. dobr-ym čolovik-am/žink-am/šatr-am
A. dobr-i čolovik-y/žink-y/šatr-a
V. dobr-i čolovik-y/žink-y/šatr-a
I. dobr-ymy čolovik-amy/žink-amy/šatr-amy
L. dobr-yx čolovik-ax/žink-ax/šatr-ax

German

N. die gutt-en Männ-er/Frau-en/Zelten
G. der gutt-en Männ-er/Frau-en/Zelt-en
D. den gutt-en Männ-ern/Frau-en/Zelt-en
A. die gutt-en Männ-er/Frau-en/Zelt-en

English

N. the good men/women/tents

G. the good men's/women's/tents'

As the following examples show, past tense verbs in Ukrainian must agree in person, gender and number with the subject. There are three forms in the singular: masculine, feminine and neuter, but only one form in the plural. In German past tense verbs are marked for person, number and tense, but not for gender, whereas in English they are only marked for tense:

Ukrainian

German

English

ja pracjuva-v/la

ich arbeite-te

I work-ed

ty pracjuva-v/la

du arbeite-test

you work-ed

vin pracjuvav

er arbeite-te

he work-ed

vona pracjuva-la

sie arbeite-te

she work-ed

vono pracjuva-lo

es arbeite-te

it work-ed

my pracjuva-ly

wir arbeite-ten

we work-ed

vy pracjuva-ly

ihr arbeite-tet

you work-ed

vony pracjuva-ly

sie arbeite-ten

they work-ed

It should be pointed out, however, that in contrast to Ukrainian and German, English possesses a set of phonologically conditioned allomorphs for plural, possessive and regular past tense morphemes. For the plural and the possessive, the morphemes are identical with one another and have the same set of allomorphs [z], [s], [Iz], e.g.

<u>Plural</u>	boys	pots	glasses
<u>Possessive</u>	boy's	Pete's	Rosa's

The past morpheme also has three allomorphs [d], [t], [Id], e.g.

played hopped painted

In addition to the complexity of the inflectional system in Ukrainian, with a great variety of inflectional categories and with the additional great variety of forms within each category, some areas present special difficulties, e.g.

1. Morphophonemic alternation plays a significant role in the grammar of the Ukrainian language and is the result of historical processes. The so-called Second Palatalization turns the sounds [h,k,x] into [c,z,s] respectively before the inflectional suffix [i] in the locative case, e.g.

<u>Nominative</u>	<u>Locative</u>
rih 'horn'	roz-i
doroh-a 'road'	doroz-i
ok-o 'eye'	oc-i
ruk-a 'hand'	ruc-i
mux-a 'fly'	mus-i
dux 'spirit'	dus-i

The First Palatalization is manifested in the vocative and involves the shift from [k, h, x] to

[č, ž, š], e.g.

Nominative

Boh 'God'
druh 'friend'
čumak 'traveler'
kozak 'Kozak'
dux 'spirit'

Vocative

Bož^ě-e
druž^ě-e
čumač^ě-e
kozač^ě-e
duš^ě-e

2. Vowel alternations [i~o] and [i~e] are found in many noun paradigms. Some nouns undergo a vowel change in the plural and the oblique cases and there is an alternation between [i~o] and [i~e] depending on whether the syllable is open or closed, e.g.

Singular

Plural

N. stol	'table'	kamin''stone'	stol-y	kamen-i
G. stol-a		kamen-ja	stol-iv	kamen-iv
D. stol-ovi		kamen-evi	stol-am	kamen'-am
A. stol		kamin'	stol-y	kamen-i
V. stol-e		kamen-ju	stol-y	kamen-i
I. stol-om		kamen-em	stol-amy	kamen'-amy
L. stol-i		kamen-i	stol-ax	kamen'ax

3. Vowel deletion

Some masculine nouns drop the vowels [e] and [o] in the last syllable in cases other than the nominative singular and those which have the same form as the nominative case, e.g.

<u>Singular</u>		<u>Plural</u>	
N. pes 'dog'	pisok 'sand'	ps-y	pisk-y
G. ps-a	pisk-u	ps-iv	pisk-iv
D. ps-ovi	pisk-ovi	ps-am	pisk-am
A. ps-a	pisok	ps-y	pisk-y
V. ps-e	pisk-u	ps-y	pisk-y
I. ps-om	pisk-om	ps-amy	pisk-amy
L. ps-ovi	pisk-u	ps-ax	pisk-ax

There are many nouns which do not undergo these vowel deletions and alternations and thus they cannot be predicted by any rule.

In contrast to the rich bound morphology in Ukrainian, English has but a few grammatical inflections. Thus, for example, nouns, with the exception of irregular nouns, have only two inflectional markings: the plural and the possessive.

German, the native language of the subjects, lies somewhere in between as far as morphological complexity is concerned. It possesses singular and plural, three genders and four cases. All of these grammatical distinctions are marked morphologically. Thus, German morphology is richer than English, but less complex than Ukrainian.

CHAPTER III

METHODOLOGY

Since the inflectional system in Ukrainian is quite extensive in scope, my analysis was limited to the investigation of inflectional morphology in nouns, adjectives and past tense verbs. For comparative purposes, the same morphemes were examined in English.

Various types of data collection were employed with a view of gathering as much linguistic material as possible. The testing procedures were chosen in order to tap the subjects' productive skills and included oral and written tasks and spontaneous as well as elicited speech samples. The subjects were tested in English and Ukrainian and the subjects' use of the inflections under study was examined. The oral production was taped and transcribed. The following types of data collection were undertaken:

1. An interview was conducted by the researcher with each of the three subjects. The interview was informal but topic-oriented and focused on such matters as where, when, how, and why the subjects have acquired English and Ukrainian, as well as the domains in which they use each of the three languages at the present time. Researchers agree that the interview is an excellent means of data collection since there is little time for monitoring, and the oral mode, by its nature, focuses on meaning rather than form.

2. Storytelling - each subject was asked to tell and write the story of Cinderella. Cinderella was chosen because it is a well-known story with which the subjects were likely to be quite familiar. Moreover, because it contains both male and female characters, it lends itself to eliciting the inflections I intended to investigate.

3. Picture story - each subject was asked to tell and write a story based on a picture, taken from an ESL text by Donn Byrne entitled Progressive Picture Compositions and published by Longman. Each picture is a sequence of four parts telling the same story. The lexical items needed to tell the story are common expressions used in everyday life.

The interview, storytelling and picture story data collection devices were designed to provide spontaneous

speech samples in both oral and written production. Researchers agree that spontaneous speech provides the best data on which to base linguistic analyses.

Language researchers cannot, however, rely exclusively on data obtained in natural communication. More controlled speech samples are needed in addition to spontaneous production. As has been pointed out in language acquisition research, certain linguistic structures are difficult to obtain in naturally occurring conversation. It is possible for the subjects to avoid certain forms and, as Schachter (1974) has demonstrated, the absence of errors does not necessarily imply competence, but, on the contrary, might indicate that the student is utilizing an avoidance strategy. Controlled testing must therefore be also used in order to obtain the forms under investigation.

In this study, elicited controlled data was collected in writing and consisted of translation and grammatical permutations. It was felt that although the written mode would not reveal the subjects' perception of the [z, s] and [d, t] allomorphs in English, it would nevertheless indicate the presence or absence of the plural and past tense morphemes as well as the use of inappropriate allomorphs revealed in such examples as churchs.

4. Translation - the subjects were asked to

translate sentences from the first language into second languages i.e. from German to Ukrainian, and from German to English. There is general agreement that translation is a valuable tool for gathering language production data because it forces the subject to use the structures which the examiner wants to elicit. Translation tasks, which included affirmative, negative and interrogative sentence types, focused on gender, number, case and past tense. A copy of the translation task from German into Ukrainian and from German into English is included in the appendix.

It should be pointed out that there is no direct correspondence in gender between Ukrainian and German. As a result, the gender of many objects and abstract nouns is different in Ukrainian than it is in German. This discrepancy in gender between German and Ukrainian provided the experimenter an opportunity to see if there is any language transfer in this area.

5. Grammatical permutations, i.e. surface "transformations" of phrases and sentences were done in writing and were intended to elicit inflectional morphology for gender, number, case and the areas of special difficulty. In Ukrainian, the singular vs. plural distinction in the nominative case involved all genders and included both forward and back formation.

In forward formation, the subjects were presented with singular forms and asked to supply plural morphemes. In back formation, which involves deletion or substitution of inflectional endings, the subjects were given the plural and were asked to supply the singular. Noun phrases from all three gender categories were included. Plural elicitations in the nominative case were limited to numbers two, three and four since other numbers require different cases. The same format was followed for the grammatical permutation task in English. Copies of the permutation tasks in Ukrainian as well as in English are included in the appendix.

It was conjectured that grammatical permutations would reveal the subjects' productive competence of inflectional morphology in the areas under study. Moreover, it made it possible for the researcher to collect the morphemes needed for her analysis.

Following Taylor's (1975) suggestion the sentences and phrases were ordered randomly in the translation and grammatical permutations and one of the subjects received the tasks in reverse random order to offset possible 'fatigue effect'.

The foregoing procedures were intended as the basic testing techniques in order to obtain the linguistic data needed for the analysis of the acquisition and use of inflectional morphology in Ukrainian as well as

in English by these German-speaking adults.

The cited data collection testing procedures included techniques which were intended to provide the researcher with spontaneous speech as well as controlled data. SLA researchers agree that both controlled and uncontrolled samples are valuable sources of linguistic data for research purposes. Spontaneous speech provides us with natural language production and elicited responses with the production of structures which would otherwise be difficult to obtain.

CHAPTER IV

PROCEDURE

Data Collection

The linguistic data for the analysis of the simultaneous acquisition of inflectional morphology in Ukrainian and English by German-speaking adults were collected over a period of nine months in a series of sessions held with each subject individually. To insure anonymity, the subjects were identified only as subject 1, subject 2 and subject 3. The sessions were planned in such a way as to preclude any carry-over from one activity to another. With this principle in mind, the following schedule was worked out for the uncontrolled testing component, which consisted of five tasks - three oral and two written:

Session 1 - Interview conducted first in Ukrainian and then in English.

- Session 2 - Cinderella and Picture Story - oral rendition in Ukrainian
- Session 3 - Cinderella and Picture Story - oral rendition in English
- Session 4 - Cinderella and Picture Story - written rendition in Ukrainian
- Session 5 - Cinderella and Picture Story - written rendition in English

Thus, five sessions were held with each subject in order to collect a corpus of spontaneous speech samples in oral and written production, both in Ukrainian and English.

The translation and grammatical permutation tasks were administered in writing in order to preclude the possibility of faulty perception of the experimental stimuli by the subjects and the possible perceptual confusion in the response items. Four experimental items were included for each inflection. The translation task in Ukrainian consisted of 260 items and the grammatical permutation task also included 260 items. In English, there were 60 items on the translation task and 60 items on the grammatical permutation task. All the test items were randomized so as not to draw attention to the specific structures being studied and to have the least amount of transfer from one test item to another.

Fatigue effects were thus also diffused across structures. Subject 1 received the translation and grammatical permutation tasks in reverse order from that of subject 2 and subject 3. Ten testing sessions were conducted with each subject in order to administer the controlled testing component of translation and grammatical permutation in Ukrainian. Two additional sessions were held to administer the same tests in English. All in all, 17 sessions were held with each subject which amounts to 51 testing sessions for the three subjects.

Data Analysis

In analyzing the data, I have disregarded all orthographical and lexical errors and have examined only errors involving inflectional morphology. In areas of special difficulty, only the specific structures which were being studied were scored for accuracy, whereas all other types of errors were disregarded. In all other paradigms I looked at the whole noun phrase and marked it incorrect in case any part was incorrect.

In the spontaneous speech production component, all utterances containing the inflections examined in this research were identified according to the linguistic context of the utterance and categorized according to the inflectional paradigm. In the oral production part, the tapes were transcribed in their entirety by the

researcher who then replayed each of them a second time to verify the transcription. In both the oral and the written components, the noun phrases were underlined and the verb phrases circled. All the noun phrases in the Ukrainian corpus were pulled out and categorized according to the three genders, singular vs. plural distinction and case distinction, whereas all verb phrases were categorized according to gender and number.

Both correct and incorrect usages were examined although the focus of the study was on error analysis. The presence and absence as well as the appropriateness of each morpheme were noted and all instances of errors were underlined in red. The number of tokens used, used correctly, and used incorrectly in each category was counted and noted. The expressions in which the inflectional markings were used incorrectly were examined and categorized according to the nature of errors. This was done for each of the seven tasks: the interview (oral), story telling and picture-based story (oral and written), translation and grammatical permutations (written), which comprised controlled and uncontrolled production as well as oral and written modes.

Gender agreement was analyzed in two ways - by examining noun phrases and past tense verbs. In examining gender agreement in noun phrases, I inspected masculine, feminine and neuter nouns and their modifiers

in the nominative singular. In analyzing past tense verbs, I looked to see if there was gender agreement between past tense verbs and subjects. Number agreement was likewise investigated by examining noun phrases in the nominative case and past tense verbs. Since singular nominative had been dealt with in discussing gender agreement, I examined nominative plural exclusively under number agreement. In noting the accuracy of inflectional morphology in different cases, I also took into consideration gender and number inflections so that correctness was, in fact, based on case, number and gender inflections.

The same technique was used for the English data and linguistic samples were categorized and analyzed according to plural, possessive and past tense grammatical markings. The data in the oral part were further analyzed for the [z, s, Iz] allomorphs in the noun phrases and [d, t, Id] allomorphs in regular past tense verbs.

In the controlled tasks, all sentences and phrases from the randomized versions, which were administered to the subjects, were transcribed in appropriate categories for further analysis and for comparison across tasks. The scoring criteria in controlled production were the same as in spontaneous production.

The data for structures investigated in areas of

special difficulty were not compiled for each task separately since very few tokens were produced in uncontrolled testing. For similar reasons, no attempt was made to compare the subjects' production of palatalized forms and structures involving vowel changes across the different testing procedures used in the study. Thus, the data involving areas of special difficulty were categorized according to the structure instead of the task.

Data Classification

All the collected data were classified according to the language used, the subject investigated, the structure under study, and the tasks used to obtain the data, according to the following schema:

I. Ukrainian

A. Subject 1

1. Gender Agreement - in nominative singular
 - a. Noun Phrase Agreement
 - b. Subject/Past Tense Verb Agreement
2. Number Agreement - in nominative plural
 - a. Noun Phrase Agreement
 - b. Subject/Past Tense Verb Agreement
3. Oblique Cases
 - a. Genitive
 - b. Dative
 - c. Accusative

d. Vocative

e. Instrumental

f. Locative

4. Areas of Special Difficulty

a. [i~o] Vowel Alternation

b. [i~e] Vowel Alternation

c. Vowel Deletion

d. Palatalization in the Vocative

e. Palatalization in the Locative

B. Subject 2

The same subdivisions as for subject 1

C. Subject 3

The same subdivisions as for subject 1

II. English

A. Subject 1

1. Plural - includes [z, s, Iz]
allomorphs

2. Possessive - includes [z, s, Iz]
allomorphs

3. Regular Past Tense - includes [d, t, Id]
allomorphs

4. Regular Past Tense Participle - includes
[d, t, Id] allomorphs

B. Subject 2

The same subdivisions as for subject 1

C. Subject 3

The same subdivisions as for subject 1

The use and degree of correctness for each structure were then compared across the three subjects and the two languages (Ukrainian and English) whose inflectional systems were being examined in this study, as well as across uncontrolled and controlled testing. It should be pointed out, that comparison of the data across the tasks proved difficult, if not impossible, since not enough tokens were produced in uncontrolled testing for some of the morphemes being studied.

CHAPTER V

ANALYSIS OF THE UKRAINIAN DATA

In chapter 5, the collected data were analyzed for each subject and for each structure under study so as to determine the subjects' use and accuracy of the inflectional morphology in Ukrainian. The degree of accuracy was expressed in percentage form. Accuracy rates were subsequently compared for uncontrolled vs. controlled testing as well as across subjects and a composite percentage was given for each structure. Due to the large volume of data, the number of items across the tasks and across the subjects was quite high, thus increasing reliability of the results. To determine the subjects' preference for a particular case in incorrect case usage, the number and types of substitution were examined and presented in Table form. In the areas of special difficulty, accuracy rates were compared for

unmarked vs. marked forms in vowel alternations and vowel deletion.

SUBJECT 1

GENDER AGREEMENT

TABLE 1A

Gender Agreement in Singular Nominative Noun Phrases
(Percent correct)

#T	Uncontrolled					Controlled		Total	%C
	I	C	PS	C	PS	TR	GP		
M U	4	4	3	1	2	4	4	22	
C	4	3	2	0	0	2	1	12	55%
F U	2	13	0	3	0	4	4	26	
C	1	10	0	2	0	2	4	19	73%
N U	0	3	1	0	0	4	4	12	
C	0	3	1	0	0	0	1	5	42%

Key: I = Interview T = Token M = Masculine
 C = Cinderella U = Used F = Feminine
 PS= Picture Story C = Correct N = Neuter
 TR= Translation
 GP= Grammatical Permutations

Table 1A shows the subject's use and error distribution in the three genders across all tasks. The correct usage included an interesting phrase consisting of an English noun "dinner" and a demonstrative pronoun "toj" (masculine) 'this' in Ukrainian. Note that there

is no violation of the general rule that the nouns ending in a consonant are masculine.

The incorrect usage was found exclusively in the modifiers, i.e. there were no errors in the nouns, so that all errors in gender agreement involved adjectives. The following types of errors were encountered:

1. The use of the inflection [y] in adjectives was very common. It is a plural noun inflection, never used in modifiers. The use of the [y] inflection was a very prevalent type of error found in adjectives modifying nouns of all three genders, but especially masculine and neuter, e.g. stary čolovik (masculine) 'the old man', harny sukonka (feminine) 'a nice dress', nimec'ky pyvo dobry (neuter) 'German beer (is) good' instead of staryj čolovik, harna sukonka, nimec'ke pyvo dobre.

2. The use of adverbs as modifiers with feminine and neuter nouns, e.g. voda (feminine) teplo (adverb) 'the water (is) warm' and sonce (neuter) je teplo (adverb) 'the sun is warm'. Similarly, the use of the neuter adjective/adverb inflection [e] instead of the feminine inflection [a] in the phrase vona (feminine) taka (feminine) duže dobre (neuter adjective/adverb) 'she (is) so good'. The adverbial expressions teplo and duže dobre are very common in such expressions as it's warm/very good. Other types of errors in the modifiers included a lack of number, case and gender agreement,

e.g. novi (plural) zošyt (masculine singular) 'a new tablet', velyki (plural) zabava (feminine singular) 'a big ball', malen'ku (accusative feminine) ližko (neuter) 'a small bed'.

TABLE 2A

Gender Agreement between Subjects and Past Tense Verbs
(Percent correct)

	#T	Uncontrolled				Controlled		Total	%C
		oral		written		written			
	I	C	PS	C	PS	TR	GP		
M U	10	23	3	10	7	4	4	61	
C	9	22	3	8	6	4	3	55	90%
F U	37	40	1	24	8	4	4	118	
C	35	39	1	21	6	4	3	109	92%
N U	2	8	0	1	1	4	4	20	
C	2	7	0	0	0	2	1	12	60%

The overwhelming majority of past tense expressions requiring gender agreement was correct. The expression mužčyna vkrav 'the man stole' is of special interest. Note that the word mužčyna is semantically masculine, but grammatically possesses a feminine ending. The subject correctly chose semantic rather than grammatical criteria for gender agreement.

The incorrect usage included the following:

1. The most frequently occurring type of error was the use of the past tense plural inflection [ly] in place

of masculine, feminine and neuter past tense verb inflections in singular, e.g. *buly* (plural) *Kaiser Franz Joseph* (masculine singular) 'there was Kaiser Franz Joseph', *ne buly* (plural) *pravdyvy* (plural) *mama* (feminine singular), '(she) wasn't a real mother', to (singular) *buly* (plural) 'it was'.

2. The feminine past tense verb inflection [la] was used with masculine and neuter nouns in singular as well as plural nouns, e.g. *čolovik* (masculine) *vydila* (feminine) 'the man saw', *vikno* (neuter) *bula* (feminine) *zbyta* (feminine) 'the window was broken'. Note that in addition to the verb in the feminine gender, the modifier contains the feminine suffix [a]. In the phrase *pryjšla* (feminine) *fijakra* 'the coach arrived' the subject added a feminine inflection [a] to the noun, changing *fiakr* to *fijakra*, and provided feminine gender agreement. Similarly, in the sentence *bula* (feminine) *vikna* *brudna* 'the window was dirty' the subject not only used the verb and the adjective in the feminine, but also changed the neuter noun *vikno*, provided by the researcher in the grammatical permutation task, to *vikna* thus providing proper gender agreement throughout the phrase.

NUMBER AGREEMENT

Number agreement was also analyzed by examining noun

phrases in the nominative case and past tense verbs. Since singular nominative had been dealt with in discussing gender agreement, I examined nominative plural exclusively under number agreement.

TABLE 3A

Number Agreement in Noun Phrases (NP)
and Subject/Past Tense Verbs (PV)
(Percent correct)

#T	I	Uncontrolled				Controlled		Total	%C
		oral		written		written			
		C	PS	C	PS	TR	GP		
NP	U 4	6	1	1	2	12	12	38	
	C 2	5	0	0	0	5	2	14	37%
PV	U 15	33	0	6	0	4	4	62	
	C 15	33	0	5	0	4	4	61	98%

Not very many noun phrases requiring number agreement were produced spontaneously, especially in written production. In the translation task, the subject was given sentences containing both singular and plural noun phrases. In the grammatical permutation task, the subject was required to form plural phrases from singular phrases supplied by the researcher.

Most errors in number agreement in masculine and feminine noun phrases involved modifiers and not the nouns. An exception to this general trend was seen in neuter nouns. The following types of errors were

found in the production of subject 1:

1. The overgeneralization of the masculine/feminine plural noun inflection [y] to adjectival forms was widespread. It was used with masculine nouns, e.g. mešty zrobleny 'shoes (were) made', feminine nouns, e.g. znamenyty školy 'excellent schools', and neuter nouns, e.g. maly miscja 'small places'. It was also used in nouns which normally take the inflection [i], e.g. mjačy 'balls', instead of mjači, as well as neuter nouns which take the inflection [a] or [ja], e.g. velyky misty 'big cities', važlyvy zavdannny 'important tasks', instead of velyki mista, važlyvi zavdannja.

2. The masculine singular adjective suffix [yj] was used in adjectives modifying plural nouns, e.g. molodyj (masculine singular) učytel'ky (plural) 'young teachers', velykyj (masculine singular) derevy (plural) 'big trees'. In addition, in the last example the neuter noun derevo was incorrectly inflected as a masculine/feminine noun. (When using the neuter noun derevo in singular, the subject used a masculine modifier, i.e. velykyj (masculine) derevo (neuter) 'a big tree'.) Occasionally, the reverse was true, i. e. the subject used a plural modifier with a singular noun, e.g. novi (plural) zošyt (masculine singular) 'a new tablet', pani (feminine singular) zadovoleni (plural)

'the lady (was) content', harni (plural) selo (neuter singular) 'a nice village'.

3. Singular nouns were used in obligatory plural contexts, e.g. dva (plural) harni (plural) monastyr (masculine singular) 'two nice monasteries', try (plural) pero (neuter singular) 'three pens'. This type of error was found in grammatical permutations, where the subject failed to pluralize singular nouns, and in translation, where plural nouns were translated as singular.

4. The analysis of number agreement between subjects and past tense verbs indicates that there was only one incorrect use of the plural past tense verb. In the phrase vony (plural) žyla (singular feminine) 'they lived', the subject incorrectly substituted the singular feminine past tense verb inflection [la] for the plural inflection [ly].

CASES

TABLE 4A

GENITIVE
(Percent correct)

#T	Uncontrolled						Controlled		Total	%C
	I	C	PS	C	PS	TR	GP			
U	25	17	7	12	4	24	24	113		
C	14	7	1	3	1	2	3	31	27%	

Quite a few expressions requiring the genitive case were produced by the subject in spontaneous speech. Most of them were used with prepositions governing genitive; the rest were used with numbers, partitives, possessives and negatives. In controlled testing, the genitive case was used with possessives in the translation task and with negatives in grammatical permutations. The results were as follows:

1. In the interview, which had the highest incidence of correctness, one expression *do školy* 'to school' was repeated correctly four times and another *do roboty* 'to work' two times. All repetitions of the above phrases were correct, thus evidencing systematicity of the learner's interlanguage.

The analysis of the errors in the spontaneous production, both oral and written, reveals that the subject used the nominative case practically without exception*, e.g. *do dvanadcjata* (nominative) *hodyna* (nominative) 'until twelve o'clock', *došč* (nominative) *nema* '(there) isn't' any rain', *kil'ko hroši* (nominative) 'how much money' instead of *do dvanadcjatoji hodyny, došču nema, kil'ko hrošej*'. The expression *pary razy* (plural nominative) 'a few times' instead of *paru*

*The overgeneralized use of the nominative singular might also be explained by the fact that this is the deictic case in Ukrainian and, in consequence, might have been extensively used/heard in naturalistic learning.

(singular) raziv (genitive plural) is especially interesting to note. The subject pluralized both words although the phrase is a fixed expression and does not allow pluralization of the word paru. Semantically, the subject was justified in using the plural nominative even though convention requires the use of the word paru in the singular followed by the plural noun raziv in the genitive.

2. In controlled testing, especially in the translation task, one finds a greater variety of errors, but the use of the nominative still predominates. The following types of errors were found in addition to overgeneralization of the nominative:

a. The subject used the feminine singular accusative inflection [u] with singular feminine nouns, e.g. vin ne maje zdorovu (accusative) žinku (accusative) 'he doesn't have a healthy wife' instead of the genitive case zdorovoji žinky as required with negative verbs, and in the possessive phrase obkladynka cijeji (genitive) knyžku (accusative) 'the cover of this book'.

b. In the translation task, the instrumental was used twice, once with the preposition z 'from/with', e.g. z odnym (instrumental) staršym (instrumental) likarom (instrumental) 'with an older doctor' and once with the preposition vid 'from', e.g. vid xlopom 'from the

fellow'. Please note that the preposition *z* takes the genitive and the instrumental, but the preposition *vid* takes only the genitive.

c. The locative was used in the translation task with prepositions *v* 'in' and *na* 'on', e.g. *v seli* (locative) 'in the village', *na bilyx xatax* (plural locative) 'on white houses'. Please note that in translating the genitive case, the subject consistently used such prepositions as *z* 'from', *vid* 'from', *v* 'in' and *na* 'on' to show possession although the sentences which were to be translated from German to Ukrainian did not contain any prepositions. It should be pointed out, however, that colloquial German uses the preposition *von* 'from' with dative noun phrases to indicate possession so that the use of prepositions *z/vid* 'from' can be viewed as L1 transfer. Additionally, it might be seen as a possible language transfer from English and a universal strategy of simplification.

d. The use of the singular instead of the plural was widespread. The subject translated plural nouns as singular in the translation task and failed to permute singular expressions to plural in grammatical permutations, e.g. *staroho* (singular genitive) *likarja* (singular genitive) 'the old doctor's' instead of *staryx likariv* (plural genitive), *novi* (nominative plural) *slovnyk* (nominative singular) 'a new dictionary'

instead of novyx slovnykiv (genitive plural). Note that in the last phrase the subject combined a plural adjective with a singular noun and used them both incorrectly in the nominative case.

TABLE 5A

DATIVE
(Percent correct)

#T	Uncontrolled					Controlled		Total %C
	oral			written		written		
	I	C	PS	C	PS	TR	GP	
U	2	0	0	0	0	24	24	50
C	1	0	0	0	0	1	2	4 8%

The analysis of the dative relied largely on controlled testing since only two expressions requiring the dative case were produced in spontaneous speech. As can be seen from Table 5A, only a small percentage of the dative production was correct. The errors included:

1. The use of the nominative in both singular and plural noun phrases, either in the whole noun phrase or in part of the phrase, e.g. moja (nominative singular) sestra (nominative singular) 'my sister' instead of mojij sestri (dative singular), svojim (dative plural) učen' (nominative singular) 'his student'. The last expression was used for both singular and plural in the grammatical permutation task.

2. The use of the genitive in singular feminine and neuter nouns, e.g. svoho (masculine/neuter genitive) žinky (feminine genitive) 'his wife's', toho (masculine/neuter genitive) ožera (neuter genitive) 'of that lake' instead of svojij žinci and tomu ozeru. In the expression svoho žinky there is an additional error in gender agreement.

3. The use of the instrumental case which takes the inflection [om] in masculine singular nouns and the inflections [im] and [ym] in modifiers, e.g. tvojim bratom (instrumental), malym synom (instrumental) instead of the dative tvojomu bratovi 'to/for your brother', malomu synovi 'to/for your son'. The use of the instrumental case was especially prevalent in plural, e.g. včytel'kamy (instrumental plural) instead of včytel'kam 'to/for teachers'. In examining plural noun phrases one notices that in the majority of cases the subject used the modifier in the dative and the noun in the instrumental, e.g. svojim (dative plural) žinkamy (instrumental plural) 'their wives', mojim (dative plural) synamy (instrumental plural) 'my sons', harnym (dative plural) mistamy (instrumental plural) 'nice cities'. It should be noted, however, that the adjectival suffixes [im] and [ym] serve to denote not only the dative plural but also the instrumental case in the singular. As a result, the use of the [im] and [ym]

suffixes can have two possible interpretations.

4. The use of singular in place of plural nouns, e.g. *tvojij teti* instead of *tvoim tetam* 'to/for your aunts'. This type of error was encountered in both the translation and the grammatical permutation tasks. Additionally, there was an occasional overgeneralization of the adjectival suffix [ym] to nouns, e.g. *starym čolovikym* 'old men' *jakym xlopčykym* 'which boys' instead of *starym čolovikam, jakym xlopčykam*.

TABLE 6A

ACCUSATIVE
(Percent correct)

#T	Uncontrolled					Controlled		Total %C
	I	oral		written		TR	GP	
U	14	C	PS	C	PS	24	24	125
C	10	12	15	9	2	9	15	72 58%

The results indicate that a fairly high percentage of expressions used in the accusative case was correct. It should be pointed out, however, that most accusative expressions are morphologically identical to their nominative counterparts. The only exception to this generalization is found in singular feminine nouns, which generally take the suffix [u], and singular masculine animate nouns, which appear in the genitive case.

Out of the 73 expressions used correctly, 54 did not differ from the nominative.

The incorrect usage had the following distribution:

1. The use of the nominative in singular feminine nouns, e.g. pobačyv Popeljuška (nominative) '(he) saw Cinderella', šukav žinka (nominative) '(he) was looking for a wife', and in masculine animate nouns, e.g. vidvidav svoho (genitive) staroho (genitive) pryjatel' (nominative) '(he) visited his old friend' in place of pryjatelja in the genitive case.

2. The use of the genitive in masculine inanimate nouns and singular feminine nouns, e.g. maju staroho miška/zolotoho hodynnyka (genitive) 'I have an old sack/gold watch instead of staryj mišok/zolotyj hodynnyk (nominative/accusative), na zabavy (genitive) 'to the dance' instead of na zabavu (accusative). This phrase was repeated four times and each time the genitive case was used. This is once again an indication that the subject's interlanguage is regular and systematic.

3. The use of the singular instead of the plural, in the entire noun phrase or in part of the phrase, e.g. harne avto (singular) 'a nice car', menšu kimnatu (singular) 'a smaller room', francuz'ki (plural) vyno (singular) 'French wine', čysti (plural) soročku (singular) 'a clean shirt' instead of the plural forms

harni avta, menši kimnaty, francuz'ki vyna, čysti soročky.

4. The use of the masculine/feminine plural noun inflection [y] in adjectives, modifying both singular and plural nouns, e.g. novy hodynnyk (singular) 'a new watch', zoloty xresty (plural) 'gold crosses' as well as in neuter plural nouns, e.g. hnizdy 'nests' instead of the appropriate hnizda.

TABLE 7A
VOCATIVE
(Percent correct)

#T	Uncontrolled					Controlled		Total %C
	oral			written		written		
	I	C	PS	C	PS	TR	GP	
U	0	2	1	0	0	24	24	51
C	0	1	0	0	0	11	9	21 41%

The vocative case was produced almost exclusively in controlled testing. No vocative expressions were produced in the written uncontrolled part, and only three expressions requiring vocative were used in oral production. Please note that in the vocative case singular masculine and singular feminine nouns have distinct morphological markings, whereas the vocative case in singular neuter as well as plural in all three genders is the same as the nominative. Only one noun

phrase requiring an inflectional change from the nominative was correct. It was the expression Bože 'God' used in the oral production of Cinderella. The rest of the correct vocative expressions were in neuter and/or plural, e.g. jasne sonce (singular neuter) 'bright sun', moji dity (plural) 'my children', i.e. in expressions which do not differ from the nominative.

The errors included:

1. The use of the nominative was the major source of errors. In fact, all incorrect noun phrases in the noun paradigms in which the vocative differs from the nominative, i.e. all masculine and feminine singular nouns contained the nominative, e.g. Petro (nominative) 'Peter', dorohyj syn (nominative) 'dear son', Maria (nominative) 'Maria', moja donja (nominative) 'my daughter' instead of Petre, dorohyj synu, Marije, moja donju.

2. The rest were errors commonly found in nominative singular and plural noun phrases and included a lack of gender, number and case agreement as well as overgeneralization of the masculine/feminine plural noun inflection [y], e.g. jasna (feminine) sonce (neuter) 'bright sun', moje (neuter nominative) slavnu (feminine accusative) misto (neuter nominative) 'my famous city', ridni sely 'native villages' instead of

jasne sonce, moje slavne misto, ridni sela. Many of these examples were found in the grammatical permutation task. Please note that in all these incorrect expressions the subject changed the phrases which were supplied in the nominative case by the researcher.

TABLE 8A
 INSTRUMENTAL
 (Percent correct)

#T	Uncontrolled			Controlled				Total %C
	I	C	PS	C	PS	TR	GP	
U	4	2	0	2	1	24	24	57
C	3	0	0	0	0	10	5	18 32%

Practically all expressions requiring the instrumental case were used with the function of instrument or accompaniment, which is always used with the preposition 'with' in English although in Ukrainian the preposition z 'with' is not always overtly expressed.

The following types of errors were made:

1. The use of the nominative was quite prevalent. Most often the nominative was used in the noun with the modifier in the instrumental case although occasionally the whole noun phrase was in the nominative, e.g. starym (instrumental) mjač (nominative), z maloju (instrumental)

sestryčka (nominative), z odno (nominative) slovo (nominative), z pohana (nominative) divčyna (nominative) in place of the instrumental starym mjačem 'with an old ball', z maloju sestryčkoju 'with (my) small sister', z odnym slovom 'with one word, z pohanoju divčynoju 'with an ugly girl'.

2. The use of the singular in place of the plural was very widespread. Note that the subject either translated the plural expressions as singular or changed the plural nominative phrases, given by the researcher in the grammatical permutation task, to singular.

3. The masculine/neuter singular instrumental noun suffix [om] was overextended to nouns which normally take the [em] suffix as well as to adjectives, e.g. starym mjačom 'with an old ball', červonom olivecom 'with a red pencil' instead of starym mjačem, červonym olivcem. Note that in the noun olivecom the subject failed to delete the vowel.

4. The dative was used mainly in plural expressions, e.g. červonym (dative) olivcjam (dative), z harnym (dative) divčatam (dative), dovhym (dative) hol'kamy (instrumental), z tym novym (dative) knyžkamy (instrumental) instead of červonymy olivcjamy 'with red pencils', harnymy divčatamy 'with pretty girls', dovhymy

holkamy 'with long needles', z tymy novymy knyžkamy 'with these new books'. Note that the subject used the dative in the whole noun phrase or in part of the phrase. It should be pointed out again that the inflection [ym] in modifiers can signal the instrumental case in singular in addition to the dative case in plural.

TABLE 9A
LOCATIVE
(Percent correct)

#T	I	Uncontrolled				Controlled		Total %C
		oral		written		written		
		C	PS	C	PS	TR	GP	
U	12	6	8	1	2	24	24	77
C	6	3	3	0	0	5	1	18 23%

In Ukrainian, the locative is used only with prepositions; hence, it is sometimes referred to as the prepositional case. It is most often used with prepositions v 'in' and na 'on' and these are the prepositions which were used in this study almost without exception. The following types of errors were found:

1. The nominative and nominative/ accusative forms were used extensively. The nominative was encountered in singular feminine noun phrases which have different inflections from the accusative, e.g. v xata (nominative) 'in the house', na vulycja (nominative) 'on the street' instead of v xati, na vulyci. In the rest of the noun

phrases where the citation form was used, the nominative form is also the accusative form. This type of error was a major source of errors in the use of the locative, e.g. v bank (nominative/accusative) 'in the bank', na telefon (nominative/accusative) 'on the telephone', u harnyj hotel' (nominative/accusative) 'in a nice hotel' u velyki tjurmy (nominative/accusative) 'in big prisons'. Please note that prepositions v/na govern the locative with the underlying meaning 'in/on' and the accusative with the underlying meaning 'into/onto'.

2. The genitive case was used 12 times, e.g. v cerkvy (genitive), 'in church', v Ukrajinjy (genitive) 'in Ukraine' v cjocho (genitive) misjacja (genitive) 'in this month', na kanapy (genitive) 'on the couch'.

3. The accusative case was used with a feminine singular noun in the expression u novu (accusative) xatu (accusative) 'in the new house'. Incidentally, the same singular phrase was repeated when plural was called for. Please note that the subject was given the plural nominative expression novi xaty 'new houses' which she then incorrectly changed into the singular.

4. The instrumental case was used two times in the translation task in the expression avtom čy pojizdom (instrumental) 'by car or by train' which the subject repeated in the singular when translating its plural

counterpart. It should be pointed out that the subject omitted the preposition v 'in/into' so that the translation using the instrumental yielded a grammatical sentence.

5. In the translation and grammatical permutation tasks, the subject failed to use the plural 11 times providing singular noun phrases instead.

TABLE 10A

SUMMARY OF INCORRECT CASE SUBSTITUTION

		N	G	D	A	V	I	L	Total	%
C A S E U S E D	N*		63	24	20	18	15	34	184	78%
	G	0		5	9	0	0	14	28	12%
	I	0	2	9	0	0		2	13	6%
	L	0	6	0	0	0	0		6	3%
	D	0	0		0	0	2	0	2	1%
	A	0	1	0		0	1	1	3	1%
	V	0	0	0	0		0	0	0	0%

Key: N = Nominative D = Dative
 G = Genitive A = Accusative
 I = Instrumental V = Vocative
 L = Locative

*Case substitutions in which the citation form was used were counted as nominative.

Table 10A, which is a composite table of case substitutions made by the subject, indicates that the nominative case was used most often in errors involving case morphology.

AREAS OF SPECIAL DIFFICULTY

The data for structures studied in areas of special difficulty were not compiled for each task separately, but added across the tasks. This was due to the fact that the subjects did not produce many expressions involving areas of special difficulty spontaneously so that the analysis depended mostly, and in some cases exclusively, on controlled testing.

TABLE 11A

Vowel Alternations [i~o, i~e], Vowel Deletion (VD),
and Palatalization
Percent correct (total number of tokens)

Vowel Alternation	[i~o]	79%	(24)
Vowel Deletion		58%	(26)
Vowel Alternation	[i~e]	28%	(25)
Palatalization	Vocative	16%	(25)
	Locative	0%	(28)
Total		35%	(128)

Vowel Alternations and Vowel Deletion

In the area involving vowel change, i.e. vowel alternations of [i~o] and [i~e] as well as vowel deletion, both unmarked and marked forms were tested. Only masculine and feminine nouns were used. The unmarked forms, i.e. forms used in singular nominative were obtained in translation and in back formation of

the plural to the singular in grammatical permutations. There were eight noun phrases in each testing category requiring the use of unmarked forms. The marked forms, containing vowels [o] and [e] and forms from which the vowel has been deleted, were tested for in plural and oblique cases. In scoring, only the appropriate vowel alternation and presence or absence of the vowel in vowel deletion was used to determine the correctness of the phrase. Other types of errors, such as inappropriate gender, number and case suffixes in nouns and/or adjectives were not taken into consideration. The results in the area involving vowel change were as follows:

1. The [i~o] vowel alternation contained many correct expressions. All occurrences of the citation form, i.e. the unmarked form used in the nominative case, were correct. The errors in oblique cases as well as in plural nominative, which contain the marked forms, involved the use of the citation form in the whole noun phrase or in part of the noun phrase, e.g. na bilim (locative) stil (nominative) 'on the white table' instead of stoli, vin maje malyj (nominative) pes (nominative) 'he has a small dog' instead of maloho psa. Occasionally, the subject provided the appropriate inflectional ending without the proper vowel change. Thus in pluralizing the expression o dyn klopit

(singular) 'one problem' the subject added the plural inflection [y] without changing the vowel [i] to [o], e.g. dva klopity (plural) 'two problems' instead of dva klopoty.

2. The alternation of vowels [i~e] was mostly incorrect. Of the seven correct expressions, four were in the nominative singular, i.e. contained the unmarked form. The incorrect usage included the use of the vowel [e] instead of [i] in the citation form, e.g. koren' 'root', hreben' 'comb' instead of korin', hrebin'. The type of error found most frequently, however, was the retention of the vowel [i] in the plural and oblique cases, e.g. in the plural, berihy 'riverbanks', lebidy 'swans' instead of berehy, lebedi; in the genitive, vedmid' 'bear', kamin' 'stone', in the instrumental, z papirom 'with paper', z lebid' 'with a swan'. Please note that sometimes the subject added the appropriate inflections, e.g. [y] in plural and [om] in the instrumental, but many times the subject simply used the nominative.

3. Vowel deletion was correct in the majority of cases. Of the 15 correct expressions, 5 contained the unmarked form and the rest were found in the plural and in oblique cases which require vowel deletion. The incorrect usage included the use of the genitive and

plural nominative in place of the singular nominative with resulting vowel deletion, e.g. osla (genitive) 'donkey', pnja (genitive) 'stump', vitry (plural) 'winds' instead of osel, pen', viter. Another type of error was the failure to delete the vowel in cases with obligatory vowel deletion, i.e. in the plural and oblique cases, e.g. osel 'donkey' instead of osly in the plural, xlopec 'boy' and pes 'dog' instead of xlopcja and psa in the genitive. Please note that the subject did not add any inflections. She simply used the singular nominative thus obviating the need for vowel deletion.

Palatalization in Vocative and Locative Cases

1. Palatalization in the vocative, which calls for the sound change of [k, h, x] to [č, ž, š] before the vowel [e] was overwhelmingly incorrect. The only correct expressions were dorohyj družě 'dear friend' and Bože 'God'. The expression Bože was used three times, once each in spontaneous testing, in translation and in grammatical permutations, each time correctly.

All errors were of the same type and consisted of the use of the nominative singular, i.e. the citation form, e.g. junak (nominative) 'young man', vrah (nominative) 'enemy', patrijarx (nominative) 'patriarch' instead of the vocative junače, vraže, patrijarše. There was only one instance in which the subject added the suffix [u], which is used in the vocative case with

certain lexical items. This suffix, however, does not necessitate a sound change.

2. All expressions requiring palatalization of the locative in singular nouns before the suffix [i] were incorrect. A major source of errors was the use of the nominative, i.e. the citation form, e.g. u ruka (nominative) 'in the hand', na rika (nominative) 'on the river', na berih (nominative) 'on the riverbank', u novim (locative) kapeljux (nominative) 'in the new hat' instead of u ruci, na rici, na berezi, u novim kapeljusi. Another type of error was the use of inflections which do not require a sound change, e.g. the locative plural inflection [ax] in the expression v rukax instead of v ruci 'in her hand', the genitive inflection [y] in na lavky 'on the bench', na dorohy 'on the road' instead of na lavci, na dorozci, the instrumental inflection [om] as in u livom okom 'in the left eye', u livom uxom 'in the left ear' instead of u livim oci, u livim usi. Note that the subject also overgeneralized the instrumental masculine noun suffix [om] to adjectives.

SUBJECT 2

GENDER AGREEMENT

The subject used many noun phrases in the nominative singular as well as past tense verbs requiring gender agreement. In most instances the usage was correct, especially in past tense verbs, as the following two Tables indicate:

TABLE 1B

Gender Agreement in Singular Nominative Noun Phrases
(Percent correct)

#T	I	Uncontrolled			Controlled			Total	%C
		oral	written		written				
		C	PS	C	PS	TR	GP		
M U	4	8	6	2	1	4	4	29	
C	4	6	6	1	0	0	3	20	69%
F U	11	5	6	5	3	4	4	38	
C	6	5	3	4	3	1	3	25	66%
N U	5	0	0	0	0	4	4	13	
C	2	0	0	0	0	0	0	2	15%

Key: I = Interview T = Token M = Masculine
 C = Cinderella U = Used F = Feminine
 PS= Picture Story C = Correct N = Neuter
 TR= Translation
 GP= Grammatical Permutations

As can be seen from Table 1B, the highest incidence of errors involved neuter nouns. Gender agreement errors in the nominative singular were of the following types:

1. The use of masculine adjectives with feminine

and neuter nouns, e.g. *toj* (masculine) *mová* (feminine) 'that language', *ostatnyj* (masculine) *xvylyna* (feminine) 'last minute', *toj* (masculine) *slovo* (neuter) 'that word', *nimec'kyj* (masculine) *pyvo* (neuter) 'German beer', *velykyj* (masculine) *ozero* (neuter) 'a big lake'.

2. The use of neuter possessive pronouns with feminine nouns, e.g. *joho mová* (feminine) *i moje* (neuter) 'his language and mine'. It should be pointed out that such expressions as 'it's mine/yours' etc. take neuter in Ukrainian.

3. The use of feminine adjectives and demonstrative pronouns with masculine nouns, i.e. *šalyk* (masculine) 'shawl' *zavjazana* (feminine) 'tied', *ta* (feminine) *harbuz* (masculine) 'that pumpkin'. These were, however, the only tokens of this type of error.

4. The use of the inflection [y], the most common plural noun inflection, in adjectives modifying masculine, feminine and neuter nouns, e.g. *kotry olivec'* (masculine) *dovhy* 'which pencil (is) long', *dočka* (feminine) *je harnišy* 'the daughter is prettier', *pyvo* (neuter) *je dobry* 'the beer is good' instead of *kotryj olivec' dovhyj*, *dočka je harniša*, *pyvo je dobre*. In fact, in the translation task all errors in the masculine gender were of the same type and involved the use of the inflection [y] in the modifier instead of the

correct singular masculine inflection [yj].

5. The use of adverbs instead of adjectives, e.g. voda (feminine) ne je teplo (adverb) ale zymno (adverb) 'the water isn't warm; it's cold', sonce (neuter) teplo (adverb) 'the sun (is) warm'.

6. Treating neuter nouns as feminine, i.e. changing the neuter noun inflection [o] to a feminine noun inflection [a], e.g. mista instead of misto 'city', krisla instead of krislo 'chair', vikna instead of vikno 'window'. In addition, the subject provided feminine gender agreement in the noun, the modifier and past tense verbs, e.g. harna (feminine) mista (feminine) 'a nice city', bila (feminine) krisla (feminine) bula (feminine) zlomana (feminine) 'the white chair was broken', vikna (feminine) bula (feminine) brudna (feminine) 'the window was dirty' instead of harne (neuter) misto (neuter), bile (neuter) krislo (neuter) bulo (neuter) zlomane (neuter), vikno (neuter) bulo (neuter) brudne (neuter).

It is interesting to note that when the subject coined new words, she provided proper gender agreement thus revealing underlying interlanguage rules governing gender. For example, the subject coined the word "vart" ending in a consonant and added a possessive pronoun with a masculine ending, i.e. svij (masculine) vart

(masculine) 'one's worth'. The subject also made up the noun "kuča" with a feminine ending and used correct gender agreement, i.e. taka (feminine) kuča (feminine) fajna (feminine) 'such a nice coach'. She also changed the masculine noun čerevyčok 'shoe' into neuter čerevyčko, again providing proper gender agreement, i.e. take (neuter) delikatne (neuter) čerevyčko (neuter) 'such a dainty shoe'.

TABLE 2B

Gender Agreement between Subjects and Past Tense Verbs
(Percent correct)

#T	I	Uncontrolled				Controlled		Total	%C
		oral		written		written			
		C	PS	C	PS	TR	GP		
M U	31	14	24	11	9	4	4	97	
	C	31	9	22	9	9	4	4	88 91%
F U	40	37	21	16	10	4	4	132	
	C	38	34	19	15	10	3	3	122 92%
N U	10	0	1	0	0	4	4	19	
	C	9	0	1	0	0	2	1	13 68%

Many more tokens of gender agreement were produced in past tense verbs than in noun phrases, especially in masculine and feminine gender. Also, the accuracy rate in gender agreement was much higher for past tense verbs than it was for noun phrases.

The following types of errors were found in gender agreement between subjects and past tense verbs:

1. Feminine past tense verb inflection [la] was used with masculine and neuter subjects, e.g. zlodij (masculine) ukrala (feminine) 'the thief stole', vin (masculine) bula (feminine) 'he was', sonce (neuter) zaxodyla (feminine) 'the sun was setting'.

2. The subject used the past verbal plural inflection [ly] with singular nouns, e.g. nixto (grammatically considered masculine singular) ne piznaly (plural) 'nobody recognized'. The same phrase, and consequently the same error, was repeated twice. Princ (masculine) prosyly (plural) 'the prince asked', vona (feminine) zhodylysja (plural) 'she agreed', mama (feminine) buly (plural) 'mother was', don'ka (feminine) včylsja (plural) 'the daughter studied' are further examples of this type of error. I think that in addition to overgeneralizing, the subject might have been using the plural as a form of deference, a practice which used to be quite common both in Germany and in Ukraine.

3. The masculine past tense verb inflection was used with feminine and neuter nouns, e.g. mama (feminine) vtišyvsja (masculine) 'the mother was glad', misto

(neuter) *buv* (masculine) 'the city was', *vikno* (neuter) *zlomyvsja* (masculine) 'the window broke', *vpertist'* (feminine) *buv* (masculine) 'persistence was'. Note, however, that the noun in the last example lacks the usual feminine [a] or [ja] inflection and ends in a consonant like the majority of masculine nouns.

TABLE 3B

Number Agreement in Noun Phrases (NP)
and Subject/Past Tense Verbs (PV)
(Percent correct)

#T	I	Uncontrolled				Controlled		Total %C	
		oral		written		written			
		C	PS	C	PS	TR	GP		
NP	U	5	3	0	4	0	12	12	36
	C	3	2	0	2	0	3	4	14 39%
PV	U	11	23	0	11	2	4	4	55
	C	11	23	0	11	2	4	4	55 100%

Number agreement was analyzed in nominative plural noun phrases as well as in past tense verb phrases. Table 3B shows that in spontaneous speech production, the subject produced many more past tense verbs than plural noun phrases in the nominative case requiring number agreement. Whereas number agreement between subjects and past tense verbs was error-free, number agreement in the noun phrases had only 39% accuracy. The errors included:

1. Overgeneralization of the inflection [y] to neuter nouns, e.g. *jakis' slovy* 'some words' instead of *slova*, *velyki derevy* 'big trees' instead of *velyki dereva*, *pery* 'pens' instead of *pera*. The [y] inflection is the plural ending for both masculine and feminine nouns and is therefore more common than the neuter plural inflection [a].

2. The use of the inflection [y] in nouns which take the suffix [i], e.g. *mjačy* 'balls', *nožy* 'knives' instead of *mjači*, *noži*. The [i] suffix is an alternate plural inflection which occurs in a number of masculine and feminine nouns, but is not as common as the [y] inflection.

3. The use of the plural noun inflection [y] in adjectives, e.g. *starsy čoloviky* 'older men' instead of *starši čoloviky*, *červony kvitky* 'red flowers' instead of *červoni kvitky*, *sumny sestry* 'sad sisters' instead of *sumni sestry*. In the expressions *maly miscy* 'small places' and *važlyvy zavdanny* 'important tasks' instead of *mali miscja/važlyvi zavdannja* the [y] inflection was overgeneralized in both the noun and the adjective.

The overextension of the [y] inflection to nouns which take other suffixes as well as to adjective paradigms reveals the subject's attempt at regularity and systematicity in her interlanguage system.

CASES

TABLE 4B

GENITIVE
(Percent correct)

#T	I	Uncontrolled			Controlled			Total	%C
		oral	written		written				
		C	PS	C	PS	TR	GP		
U	33	8	12	11	3	24	24	115	
C	13	4	9	1	1	1	0	29	25%

The subject produced many expressions using the genitive case, but most of them, especially those in the written mode, were incorrect. We also find that the ratio of correct usage in the oral data was somewhat inflated since the same correct expression do školy 'to school' was repeated 5 times and the word volossja 'hair' which does not change in the genitive case, i.e. both the nominative and the genitive use the citation form, was used correctly four times.

The incorrect usage included:

1. The use of the nominative case, e.g. do Ameryka 'to America', ne mav čas '(he) didn't have time', ne buly tabory 'there weren't any camps' instead of do Ameryky, ne mav času, ne bulo taboriv. The last expression requires the use of a neuter verb plus genitive.

Instead, the subject used the plural past tense verb suffix [ly] and a plural noun in the nominative case thus providing number agreement. The use of the nominative case was the major source of errors. This was especially evident in grammatical permutations in which practically all plural expressions contained nominative endings. In addition, in a number of cases the subject used the singular instead of the plural although the supplied stimulus was plural.

2. The use of the dative in the plural expression *daxy bilym* (dative) *xatam* (dative) instead of *daxy bilyx xat* (genitive) 'the roofs of the white houses'.

3. The use of the accusative feminine singular inflection [u] with singular feminine noun phrases, especially in the grammatical permutation task, e.g. *z Evropu* (accusative) 'from Europe', *vin ne maje čystu tarilku/zdorovu žinku* (accusative) 'he doesn't have a clean plate/a healthy wife' instead of *z Evropy, čystoji tarilky/zdorovoji žinky* (genitive).

4. The use of the instrumental singular masculine ending [om] with the preposition *z*, e.g. *z šklom* (instrumental) instead of *z škla* 'of glass', *ruky z xlopom* (instrumental), *majno z bat'kom* (instrumental) instead of the genitive case *ruky xlopcja* 'the boy's

hands', majno bat'ka 'father's property'. In the last two phrases, the genitive indicating possession does not require a preposition, but in the translation task the subject consistently used prepositions vid 'from', z 'with/from' and occasionally v/u 'in'.

5. The use of the locative, always with a preposition (locative is never used without prepositions in Ukrainian), e.g. stiny u kimnatax (locative) 'the walls in the rooms' z Nimeččyni (locative), 'from Germany', do sklepi (locative) 'to the store' instead of the genitive stiny kimnat, z Nimeččyny, do sklepu. Note that in the first example the subject's rendition is correct. The subject simply chose to translate the sentence using a prepositional phrase of location instead of possessive genitive. Whereas preposition u governs the accusative and the locative, prepositions z and do never take the locative case.

TABLE 5B

DATIVE
(Percent correct)

#T	I	Uncontrolled				Controlled		Total %C
		oral		written		written		
		C	PS	C	PS	TR	GP	
U	0	0	0	1	1	24	24	50
C	0	0	0	0	0	6	1	7 14%

Interestingly enough, the subject did not produce any expressions in the dative case in the oral production. In the written uncontrolled component, there were only two phrases requiring the dative, none of which was correct. This shows that most expressions requiring an indirect object relationship were used with prepositions and seems to indicate a lack of a direct transfer from L1 since German possesses a dative case which is signaled with inflectional morphology. All correct expressions were in the plural.

The incorrect usage included:

1. The nominative case was used most often. It was used in both singular and plural and in all three genders, e.g. *pryhadała Popeljuška* (singular feminine nominative) '(she) reminded Cinderella', *daju učitel'* (singular masculine nominative) 'I give the teacher', *daje tvoji sestry* (plural nominative) '(she) gives your sisters' instead of *Popeljušci, učytelevi, tvojim sestram*. An additional error in plural noun phrases was the use of singular in place of plural, as well as the use of masculine and feminine plural inflection [y] in neuter nouns.

2. There were three occurrences of the use of the genitive, in the entire noun phrase or part of the phrase, e.g. *djakuvala staroho* (genitive) *dida*

(genitive) '(she) thanked the old man', daju tvomu (dative) staršomu (dative) brata (genitive) 'I give to your older brother', vin dav hroši do učytelja (genitive) 'he gave money to the teacher' instead of the dative staromu didovi, tvomu staršomu bratovi, učytelevi. Note that in the last example the subject used the preposition do 'to' which governs the genitive case. In the translation task the subject used the prepositions do 'to' and dlja 'for' several times although the dative is never used with prepositions in Ukrainian and no prepositions were given in the German sentences to be translated.

3. The instrumental was used mainly in the masculine and neuter nouns which take the suffix [om], e.g. malym synom (instrumental) instead of malomu synovi 'to my small son', teplym litom (instrumental singular) instead of teplym litam (dative plural) 'to warm summers'.

TABLE 6B

ACCUSATIVE
(Percent correct)

#T	Uncontrolled					Controlled		Total	%C
	I	C	PS	C	PS	TR	GP		
U	17	19	23	18	10	24	24	135	
C	8	14	17	6	6	7	6	64	47%

As can be seen from Table 6B, there are more correct expressions in the accusative than in the genitive and the dative. The obvious reason for this is the fact that in many instances the accusative has the same inflectional forms as the nominative. In fact, only the feminine singular has a distinct morphological marking. There is no morphological distinction between the two cases in plural nouns, no matter what the gender, as well as in singular neuter and masculine inanimate nouns. Of the 64 correct accusative expressions, 44 expressions do not differ from the nominative case, e.g. rozsypany zernjatka (plural nominative/accusative) 'scattered the seeds', mav šalyk (masculine inanimate nominative /accusative) '(he) had a shawl', vidčyny vikno (singular neuter nominative/accusative) 'open the window'.

The incorrect expressions contained the following types of errors:

1. The use of the nominative in singular feminine noun phrases, e.g. dali najhirša robota (nominative) 'they gave the worst task' instead of najhiršu robotu (accusative), and in masculine singular animate nouns, e.g. bačyla molodyj knjaz' (nominative) instead of molodoho knjazja (genitive) '(she) saw a young prince'.

2. The use of the genitive in singular feminine nouns, e.g. *znav anhlijs'koji movy* (genitive) '(he) knew the English language' instead of *anhlijs'ku movu* (accusative) as well as in singular masculine inanimate nouns, e.g. *ukrala portfelja* (genitive) '(she) stole a purse' instead of *portfel'* (nominative/accusative).

3. The use of the accusative feminine singular ending [u] with masculine and neuter nouns, either in the whole noun phrase or in part of the phrase, e.g. *ja maju zolotu* (singular feminine accusative) *xrest* (masculine inanimate nominative/accusative) 'I have a gold cross' instead of *zolotyj xrest*, *my bačyly malen'ku hnizdu* (feminine singular accusative) 'we saw a small nest' instead of *malen'ke hnizdo* (singular neuter nominative/accusative).

4. The rest of the errors involve a lack of gender, number and/or case agreement between the noun and its modifiers, e.g. *novyj* (masculine singular) *hodynnyky* (masculine plural) 'new watches', *molodyj* (masculine singular) *sestry* (feminine plural) 'young sisters', *zolotu* (feminine accusative) *xrest* (masculine nominative/accusative) 'a gold cross'. An additional error was the use of the masculine/feminine plural noun ending [y] in adjectives and neuter nouns, e.g. *zoloty xresty* 'gold crosses', *velyky mory* 'big seas' instead of *zoloti xresty*, *velyki morja*.

TABLE 7B
 VOCATIVE
 (Percent correct)

#T	Uncontrolled					Controlled		Total %C
	I	C	PS	C	PS	TR	GP	
U	0	2	0	0	0	24	24	50
C	0	1	0	0	0	3	4	8 16%

The subject produced only two vocatives in spontaneous speech. Both were found in the oral production of Cinderella. One of them, namely 'moja žinočko' 'my dear wife' is used correctly, while the second one is in the nominative. I would conjecture that the expression moja žinočko was learned as a phrase since I have, in fact, heard the subject's husband use it as an endearing term to his wife. The incorrect usage included:

1. The nominative, i.e. the citation form, was used to a great extent in masculine and feminine singular nouns, e.g. dorohyj syn (nominative masculine) 'my dear son' instead of dorohyj synu (vocative), Iryna (nominative feminine) 'Irene' instead of Iryno (vocative).

2. In plural nouns and in singular neuter nouns, in which vocative and nominative suffixes are identical, the errors most often involved the overextension of the

masculine/feminine plural noun ending [y] to adjectives and neuter nouns. In addition, in a number of expressions, the subject provided singular instead of plural noun phrases even though the phrases given by the researcher were plural.

TABLE 8B
INSTRUMENTAL
(Percent correct)

#T	Uncontrolled					Controlled		Total %C
	I	C	PS	C	PS	TR	GP	
U	4	0	2	5	0	24	24	59
C	0	0	1	2	0	5	6	14 24%

In the uncontrolled component, the subject did not produce many expressions which would require the use of the instrumental case, and the ones that were produced were mostly incorrect. The predominant error was the substitution of the nominative and the dative, the latter almost exclusively in the plural. In more detail, the errors included the following:

1. The use of the nominative was quite widespread, e.g. z maslo (nominative) 'with butter', synim (instrumental) olivec' (nominative) 'with a blue pencil' instead of z maslom, synim olivcem (instrumental).

2. There were two expressions in the genitive, both

of them in the oral production. One of them was našoji (genitive) movy (genitive) hovoryty 'to speak our language' instead of našoju movoju (instrumental). Note that the verb hovoryty governs the instrumental. The second expression miž tyx ljudej 'among those people' can be considered genitive or accusative, i.e. the expression is inflectionally identical in genitive and accusative. The preposition miž 'among' governs the instrumental and the accusative cases.

3. The use of the dative instead of the instrumental was found mainly in the translation task in plural noun expressions, e.g. červonym olivcjam (dative plural) z bat'kam (dative plural), z materjam (dative plural) instead of the instrumental červonymy olivcjamy 'with red pencils', z bat'kamy 'with fathers', z materjamy 'with mothers'.

4. The overgeneralization of the masculine/neuter singular instrumental noun ending [om] to adjectives, e.g. z odnom slovom 'with one word', z červonom perom 'with a red pencil' instead of odnym slovom, červonym perom and to feminine nouns, e.g. Popeljuškom 'with Cinderella', z teplym vodom 'with warm water', z vperistom 'with tenacity' instead of Popeljuškoju, teploju vodoju, vperistju. Please note that in the last example the subject reveals a great deal of systematicity in choosing the masculine inflection since the word

vpertist' ends in a consonant and this is characteristic of masculine gender. In fact, when the subject used the word vperstist' in the nominative case, she provided masculine gender agreement with the past verb i.e. vperstist' buy instead of vperstist' bula.

TABLE 9B
LOCATIVE
(Percent correct)

#T	Uncontrolled					Controlled		Total	%C
	oral			written		written			
	I	C	PS	C	PS	TR	GP		
U	20	11	11	0	2	24	24	92	
C	10	5	5	0	1	2	3	26	28%

All noun phrases in the locative were used with prepositions v/u 'in' and na 'on, the two most common prepositions used with the locative case. As seen in Table 9B, roughly half of the expressions produced by the subject in spontaneous production were correct, whereas only a small portion of the controlled production was correct. Of the correct items, one expression 'v xati' 'in the house' was repeated four times and the expressions 'v Nimeččyni' 'in Germany' and v kljasi 'in class' were repeated twice and each time they were correct.

Incorrect usage included the following:

1. The use of the nominative in singular feminine nouns, e.g. u cerkva (nominative) 'in church', na sofa (nominative) 'on the sofa', v Ameryka (nominative) 'in America' instead of the locative case cerkvi, sofi, Ameryci.

2. The use of the genitive, mostly with the same or similar lexical items, i.e. na anhlijs'koji movy 'in the English language' (this expressions was used twice), u nimec'koji movy 'in the German language', v ukrajins'koji movy 'in the Ukrainian language', v movy 'in the language'.

3. The use of the nominative/accusative in the plural as well as in singular neuter and masculine inanimate nouns, e.g. u korotkyj čas (nominative /accusative) 'in a short time', v avto/pojizd (nominative /accusative) 'in the car/train', v harni hoteli (nominative/accusative) instead of korotkim časi, avti/pojizdi, harnyx hoteljax. Note again that there is no difference in inflectional morphology between the nominative and the accusative in the above examples.

4. The use of the accusative in singular feminine nouns, which are the only noun paradigms with a distinct inflection in the accusative, e.g. na vulycju 'in the street', na tablycju 'on the blackboard' instead of na vulyci, na tablyci. The [u] inflection was extended to the neuter noun phrase u malu šatru 'in

AREAS OF SPECIAL DIFFICULTY

TABLE 11B

Vowel Alternations [i~o, i~e], Vowel Deletion, and Palatalization

Percent correct (total number of tokens)

Vowel Alternation	[i~o]	70%	(27)
Vowel Deletion		41%	(32)
Vowel Alternation	[i~e]	31%	(26)
Palatalization	Vocative	8%	(24)
	Locative	7%	(30)
Total		30%	(139)

Vowel Alternations and Vowel Deletion

The data in areas of special difficulty come from controlled testing, which constitutes the major part of the data, and expressions produced in spontaneous speech. In areas of special difficulty involving vowel alternations and vowel deletion, the subject had to change the nominative singular to the plural or to an oblique case, namely the genitive and the instrumental. This requires a vowel change from [i] to [o], e.g. *odyn niž* (singular) 'one knife' to *try noži* (plural), *kin* 'horse' (nominative) to *konja* (genitive), *kit* 'cat' (nominative) to *kotom* (instrumental). In back formation, the subject was required to permute plural noun phrases to singular, i.e. to the citation form, with the vowel shift from [o] to [i], e.g. *tabory* (plural) 'camps' to

tabir (singular), nosy 'noses' (plural) to nis (singular). In the translation task some of the items to be translated involved the nominative singular, i.e. the citation form, whereas others involved plural and oblique cases.

The results indicate that the subject was most successful in the [i~o] vowel alternation and least successful in [i~e] alternation. It should also be stressed that the use of the citation form, i.e. the nominative singular, was more often correct than plural or oblique forms. In fact, in the translation task all singular nominative forms in the three areas of special difficulty involving vowels were correct. In the grammatical permutation task, all nominative singular expressions involving [i ~ o] alternation were correct, whereas there was one incorrect form each in vowel deletion and in [i ~ e] alternation. More errors were made in the plural and oblique cases, especially in the [i ~ e] vowel alternation where there was only one correct form containing the vowel shift from [i] to [e] in the expression z ledom (instrumental) 'with ice' from the word lid (nominative).

Palatalization in Vocative and Locative

To test palatalization, the subjects were required

to produce palatalized forms, i.e. in the translation task they had to translate sentences containing singular vocative and locative expressions which undergo obligatory palatalization before the suffix [e] and [i] respectively. In the grammatical permutation task, the subjects were required to change the nominative expressions, provided by the researcher, to vocative and locative, with appropriate palatalization. No vocative expressions requiring palatalization, and only a few locative ones were produced in spontaneous speech.

As Table 11B indicates, only two nouns in the vocative were used with the proper sound change. The correct expressions were dorohyj družě 'my dear friend', and mij Bože 'my God'. Most nouns were used in the nominative, i.e. with no inflection added to the citation form, e.g. kozak 'Kozak', vrah 'enemy', patrijarch 'Patriarch'. In two cases the subject incorrectly added the suffix [u], which does not require palatalization, e.g. raku 'crab' instead of račě.

In the locative case, only one expression na lavci 'on the bench' was palatalized. It was used twice, both times in the oral production of the picture story. The rest of the examples were used either in the nominative, e.g. u Ameryka 'in America', na kapeljux 'on the hat' or were supplied with such suffixes as [u], [y] and [om]

which do not require palatalization, e.g. na riku (accusative) 'on the river', na dorohy (genitive) 'on the road', u okom (instrumental) 'in the eye'. One expression 'na staršim viki' was correctly inflected for the locative, but without the accompanying sound change.

Please note that many of the nominative expressions can also be considered accusative and that the prepositions v 'in' and na 'on' govern both the locative and the accusative.

SUBJECT 3

GENDER AGREEMENT

The following Table shows the subject's use and production accuracy of gender in singular nominative noun phrases:

TABLE 1C

Gender Agreement in Singular Nominative Noun Phrases
(Percent correct)

#T		Uncontrolled				Controlled				Total %C
		oral		written		written				
	I	C	PS	C	PS	TR	GP			
M	U	8	1	4	0	4	4	4	25	
	C	8	1	3	0	3	4	4	23	92%
F	U	6	7	1	7	2	4	4	31	
	C	5	6	0	5	2	3	4	25	81%
N	U	1	0	0	0	0	4	4	9	
	C	0	0	0	0	0	0	0	0	0%

Key: I = Interview T = Token M = Masculine
 C = Cinderella U = Used F = Feminine
 PS= Picture Story C = Correct N = Neuter
 TR= Translation
 GP= Grammatical Permutations

As can be seen from Table 1C, the expressions requiring masculine and feminine gender agreement were predominantly correct. The incorrect usage was found mainly with neuter nouns. In fact, all of the expressions requiring neuter gender agreement contained some

errors.

The incorrect usage included:

1. The use of masculine modifiers with feminine and neuter nouns, e.g. a. *toj* (masculine) *žinka* (feminine) 'that woman' b. *cilyj* (masculine) *nič* (feminine) 'the entire night'. This expression was repeated twice and each time the same error was made. Note that the subject used the rules governing gender in Ukrainian since nouns ending in a consonant are generally masculine. c. *Toj* (masculine) *slovo* (neuter) 'that word'.

2. The use of an adverb instead of an adjective as a noun modifier, e.g. a. *xata* (feminine) *čysten'ko* (adverb) 'a clean house' b. *voda* (feminine) *ne je teplo* (adverb), *vona* (feminine) *je zymno* (adverb) 'the water isn't warm; it's cold'. It should be pointed out that the words 'zymno', 'teplo', 'čysten'ko' are used as adverbs in such everyday expressions as 'it's cold/warm/clean'.

3. Changing the gender of a neuter noun, i.e. using the feminine suffix [a] in place of the neuter suffix [o], e. g. *mista* (feminine) instead of *misto* (neuter) 'city'. The subject used the modifier 'harna' (feminine) and thus provided gender agreement.

TABLE 2C

Gender Agreement between Subjects and Past Tense Verbs
(Percent correct)

#T	Uncontrolled					Controlled		Total %C
	I	C	PS	C	PS	TR	GP	
M U	21	4	0	4	1	4	4	38
C	21	4	0	4	1	4	4	38 100%
F U	45	28	1	21	1	4	4	104
C	42	25	1	20	1	4	4	97 93%
N U	7	2	1	4	0	4	4	22
C	4	2	1	3	0	2	1	13 59%

Many more feminine than either masculine or neuter past tense verb expressions were used in the interview and Cinderella. The reason for this becomes obvious when we take into account the fact that the subject was talking mainly about herself and that there are more female than male characters in Cinderella. Also, very few past tense expressions were produced in the picture story since the subject was using the present tense most of the time.

The errors involving gender agreement between subjects and past tense verbs were as follows:

1. The use of the plural inflection [ly] in place of the feminine [la], e.g. ja išly 'I went' instead of ja išla (the same error was made twice), vona musily 'she

had to' instead of vona musila. In fact, all errors in the feminine past tense verbs were of this type and were thus errors of number rather than gender.

2. The use of the plural inflection [ly] instead of the neuter inflection [lo] with numbers, e.g. pryjšly 45 'there came 45 (people)' and buly 24 'there were 24 (people)'. Grammatically, the verb should be neuter; semantically, however, the subject was quite justified in using the plural.

3. The use of the plural inflection [ly] with the pronoun nixto 'nobody', e.g. nixto ne xotily 'nobody wanted' which also points to semantic considerations.

4. The use of the feminine verb inflection [la] with a neuter noun, e.g. svitlo (neuter) 'light' bula (feminine) 'was'. It is interesting to note the subject's use of a feminine past tense verb with a feminine noun in the expression školy ne bula 'there was no school'. Since the phrase is in the negative, it requires the use of the verb in the neuter with a genitive noun. Although the subject inflected the noun for the genitive, she again used semantic rather than grammatical criteria by using past tense feminine inflection with a feminine noun.

5. The use of the masculine verb ending with a

neuter noun, e.g. vikno (neuter) 'window' buy (masculine) 'was'. This, however, was the only instance of the overgeneralization of the masculine past tense verb inflection [v].

NUMBER AGREEMENT

Number agreement was also analyzed by examining noun phrases in the nominative case and past tense verbs. Since singular nominative was dealt with in discussing gender agreement, I examined nominative plural exclusively under number agreement.

TABLE 3C

Number Agreement in Noun Phrases (NP)
and Subject/Past Tense Verbs (VP)
(Percent correct)

#T	I	C	PS	C	PS	TR	GP	Total	%C	
NP U	10	8	1	2	0	12	12	45		
	C	8	7	1	0	0	2	5	23	51%
PV U	22	17	0	4	0	4	4	51		
	C	20	16	0	4	0	3	4	47	92%

The errors in the noun phrases included:

1. The use of a singular noun with a plural modifier, e.g. a. prync (singular) zadovoleni (plural) 'the prince (is) satisfied'. It should be noted, however, that a generation ago it was a common practice to use the plural when addressing or referring to people representing authority.

2. The use of the feminine form *dvi* 'two' instead of the masculine form *dva* with a masculine noun, e.g. *ci dvi* (feminine) *hodynnyky* (masculine) 'these two watches'. The subject made the same error twice. It is a form of overgeneralization since [i] is the adjectival plural ending.

3. *Dvi ruki* 'two hands' instead of *dvi ruky*. Again, this is a form of generalization, i.e. the use of the adjectival plural ending [i] to pluralize the noun instead of the masculine and feminine plural noun ending [y] (some nouns are also pluralized by the addition of [i]). Similarly, the use of the plural noun ending [y] in both nouns and adjectives, e.g. *cikavy knyžky* 'interesting books' instead of *cikavi knyžky*.

4. The use of the masculine/feminine plural inflection [y] to pluralize neuter nouns, e.g. *derevy* 'trees' instead of *dereva*. In using the word *derevo* 'tree' in singular, the subject changed it to a feminine form *dereva*, and provided complete gender agreement throughout the phrase, i.e. *bula* (feminine) *velyka* (feminine) *dereva* (feminine) 'there was a big tree'.

In the grammatical permutation task, both forward and back formation were tested. No appreciable

difference in the results was found between the two. Many more errors, however, were found in the neuter in both forward and back formation than in either the masculine or the feminine. The errors in plural neuter noun phrases consisted mainly of masculine and feminine plural noun inflection [y] instead of the neuter plural inflection [a]. These errors can, I believe, be best explained by the notion of frequency of occurrence and the overgeneralization of the more frequent masculine and feminine plural inflection [y]. The errors in back formation, i.e. forming singular from plural occurred mainly in modifiers and involved the use of the masculine and feminine inflectional endings.

One expression used by the subject was especially interesting. The subject used a Ukrainian adjective "rižni" 'various' with an English plural noun "titles". It is interesting to note that the modifier contains a plural inflection so that there is number agreement between the adjective and the noun.

Number agreement between the subject and past tense verb phrases was mostly correct. The errors included the following:

1. The use of the singular feminine verb inflection [la] with a plural noun, e.g. dity (plural) počynala (feminine singular) 'children started', bula (singular feminine) malen'ki (plural) '(they) were small'.

2. The use of the neuter verb inflection [lo] with a plural noun, e.g. vy (plural) pytalosja (neuter) 'you asked'.

CASES

TABLE 4C

GENITIVE
(Percent correct)

#T	Uncontrolled					Controlled		Total	%C
	I	C	PS	C	PS	TR	GP		
U	29	12	6	10	2	24	24	107	
C	19	8	2	6	1	2	4	42	39%

Three correct responses, i.e. do Anhlíji 'to England', do čolovíka 'to my husband', do školy 'to school' were repeated and each time they were correct. In addition, some of the correct expressions, e.g. 'paru raziv' 'a few times', 'bahato raziv' 'many times' are fixed expressions which were probably acquired as units. The incorrect usage had the following distribution:

1. The use of the nominative, e.g. divčyna (nominative) 'girl', moja sestra (nominative) 'my sister' instead of the genitive divčyny, mojeji sestry. The use of the nominative was the predominant type of error. In fact, in grammatical permutations all plural nouns were

in the nominative case. Expressions using plural neuter nouns contained an additional error since they were formed according to the masculine/feminine paradigm and incorrectly contained the inflection [y] instead of the plural neuter [a]. The phrase 'paru misjaci' (nominative) 'a few months' was repeated twice, each time incorrectly. Please note that the expression 'paru raziv' 'a few times' was used correctly. The difference lies, I believe, in the fact that the phrase paru raziv is a fixed expression and, additionally, the distinction between the nominative and genitive plural in misjaci /misjaciv is not as salient as it is in razy/raziv.

2. The use of the accusative feminine inflection [u] with feminine nouns and occasionally with modifiers used with masculine/neuter nouns, e.g. vid xatu do xatu 'from house to house' instead of vid xaty do xaty, ja ne maju čystu tarilku 'I don't have a clean plate' instead of čystoji tarilky, vin ne maje novu slovnyk/synu pero 'he doesn't have a new dictionary/blue pen' instead of novoho slovnyka/synoho pera. In the grammatical permutation task, all four feminine singular testing items were in the accusative and contained the inflection [u].

3. The use of the instrumental, most often with the preposition z, e.g. z odnohom bokom, z knyžkoju instead

of z odnoho boku 'on one side', z knyžky 'from a book'. This preposition takes the instrumental case with the meaning 'with', and the genitive case when the underlying meaning of the preposition is 'out of/from'.

4. The use of the locative, e.g. v monastyri (locative) 'in the monastery', v misti (locative) 'in the city' instead of the genitive monastyrja and mista. The locative was used almost exclusively in the translation task with the preposition v/u 'in' which generally takes the locative case. This can be construed as an avoidance strategy since the sentences which were translated from German to Ukrainian did not contain a preposition. Another piece of evidence of avoidance strategy is the fact that in three cases the subject changed the noun which was to appear in the genitive to an adjective, e.g. bat'kovi (adjective) majny 'father's property'. The word 'majny' is neuter and thus incorrectly contains a masculine/feminine inflection [y]. In the expression don'kovi torba 'the daughter's bag', the subject followed the above example and changed the word don'ka 'daughter' to an adjective form 'don'kovi', a form which is not found in Ukrainian.

In the translation task, the subject consistently used prepositions 'vid' and 'z' which have the meaning 'of' or 'from'. This can be explained as transfer from

German since in colloquial German the preposition von 'of/from' is often used with the dative case to signal possession. This L1 transfer might have been further strengthened by the subjects' knowledge of English, and/or a simplification strategy.

TABLE 5C

DATIVE
(Percent correct)

#T	Uncontrolled					Controlled		Total %C
	I	C	PS	C	PS	TR	GP	
U	0	1	1	1	2	24	24	53
C	0	0	0	0	2	1	4	7 13%

Only five expressions using the dative case were found in the subject's spontaneous production, two of which were correct. One of them 'slava Bohu' 'thank God' is a fixed expression; the other was an adjective used as a noun 'staromu' 'to the old (man)'. The incorrect phrases contained the genitive in the singular, e.g. druhoji mamy and the instrumental in the plural, e.g. dočkamy in place of the dative druhij mami 'to/for the second mother' and dočkam 'to/for the daughters'.

In controlled testing, the use of the dative case was overwhelmingly incorrect. The translation and grammatical permutation tasks had the following error

distribution:

1. The nominative was used 12 times, mainly in feminine and neuter singular nouns.

2. The genitive was used 12 times, mainly with masculine singular nouns. In addition, in the translation task, there was a tendency to use the preposition *dlja* 'for' which takes the genitive case. This could be explained as an indication of language transfer from English, avoidance, and universal simplification strategies.

3. The instrumental case was used 12 times, always in the plural. In most instances, the modifiers contained the dative inflection [ym], but the nouns contained the instrumental ending [amy] instead of the dative [am], e.g. *vašym* (dative) *žinkamy* (instrumental) instead of *vašym žinkam* 'to/for your wives'.

It should be pointed out that the incidence of correct responses would be higher if I were to examine only the nouns and leave out the modifiers. In spontaneous production, there were more correct responses because the subject often used the noun alone, whereas in the translation and the permutation tasks nouns plus one or two adjectives were included.

It is difficult to judge if there was any

substantial difference in correctness between the uncontrolled and controlled testing components since the subject produced very few expressions in the dative in spontaneous production.

TABLE 6C

ACCUSATIVE
(Percent correct)

#T	Uncontrolled					Controlled		Total %C
	oral			written		written		
	I	C	PS	C	PS	TR	GP	
U	31	20	20	23	13	24	24	155
C	21	9	12	13	11	6	12	84 54%

As can be seen in Table 6C, the subject produced a large number of accusatives, the majority of which were correct. It should be pointed out, however, that out of the 84 correct expressions, 54 have identical inflections in the nominative and the accusative since all plural nouns and all singular inanimate nouns with the exception of the feminine have the same inflectional suffixes in both the nominative and the accusative.

The incorrect usage had the following distribution:

1. There were 17 occurrences of the nominative case. The nominative was used instead of the genitive/accusative with animate masculine nouns, e.g. vin xotiv

vedmedyk (nominative) 'he wanted a teddy bear' instead of vedmedyka (genitive/accusative) as well as with singular feminine nouns which regularly take the [u] inflection, e.g. ja znaju nimec'ka (nominative) mova (nominative) 'I know the German language' instead of nimec'ku (accusative) movu (accusative).

2. There were 19 occurrences of the genitive case with feminine nouns, e.g. znajty divčyny (genitive) 'to find a girl' instead of divčynu (accusative) and with masculine inanimate nouns, e.g. zahubyla mešta (genitive) 'she lost a shoe' instead of mešt (nominative/accusative).

3. There were 3 occurrences of the instrumental case and 3 of the locative case, mostly with prepositions. The instrumental was used with the preposition za 'by/behind', e.g. za rukamy (instrumental) instead of za ruky (nominative/accusative) 'by hands' and with the preposition miž 'between', e.g. miž nohamy (instrumental) 'between the feet' instead of miž nohy (nominative/accusative). Both of these prepositions govern the accusative and the instrumental depending on the underlying meaning of the preposition. The locative was used with prepositions u 'in/into' and na 'on/onto' which, again, govern the accusative and the locative.

TABLE 7C

VOCATIVE
(Percent correct)

#T	I	Uncontrolled				Controlled		Total %C
		oral		written		written		
		C	PS	C	PS	TR	GP	
U	0	0	0	0	0	24	24	48
C	0	0	0	0	0	8	12	20 42%

As can be seen from Table 7C, the vocative was produced only in translation and grammatical permutations. In the translation task all correct responses, with one exception, were plural where the nominative and the vocative have the same inflectional ending. The exception was the phrase 'mij družę' 'my friend' which was the only vocative in the singular used correctly and which might have been acquired as a phrase since it is commonly used among Ukrainians. All other masculine and feminine singular noun phrases were incorrectly used in the nominative, e.g. mij syn (nominative) 'my son', Petro (nominative) 'Peter' instead of mij synu, Petre. In neuter nouns the vocative case is identical to the nominative in both singular and plural. Errors, however, were made in treating the neuter noun phrases as feminine, in adding masculine modifiers to neuter nouns and in adding the

adjective plural ending [i] to nouns.

In the grammatical permutations, the same trend was evident. The masculine and feminine plural nouns which are not inflectionally distinct from the nominative were used correctly. In singular, the subject either used the nominative or overgeneralized the inflection [u], which is the feminine accusative singular inflection as well as a vocative inflection in some linguistic contexts, e.g. Irenu 'Irene', Marijku 'Maria' instead of Ireno, Marijko.

TABLE 8C

INSTRUMENTAL
(Percent correct)

#T	I	Uncontrolled				Controlled		Total %C
		oral		written		written		
		C	PS	C	PS	TR	GP	
U	3	6	2	4	2	24	24	65
C	3	3	1	1	1	17	6	32 49%

The results in Table 8C indicate that most expressions requiring the instrumental were produced in controlled testing. Also, there was a surprisingly high percentage of correct items in the translation task. The correct expressions most often involved the singular masculine instrumental ending [om] and the plural which contains the inflection [amy] in all genders. Examining the incorrect usage, one notices the following trends:

1. The masculine instrumental inflection [om] was overgeneralized to feminine nouns, e.g. z palycjom 'with a cane', z ložkom 'with a spoon', instead of z palyceju, z ložkoju, as well as to nouns which contain a softening sound in the nominative and thus take the inflection [em] in the instrumental e.g. 'olivcom' 'with a pencil' instead of olivcem. 'korolom' 'with a king' instead of 'korolem'.

2. The [om] suffix was also used in singular adjectives which normally contain the ending [ym], [jim] or [oju], e.g. starohom mjačom 'with an old ball' instead of starym mjačem, z mohom bratom 'with my brother' instead of 'z mojím bratom', dovhom holkoju 'with a long needle' instead of dovhoju holkoju.

3. As mentioned earlier in discussing the dative, there was a tendency to confuse dative and instrumental plural inflections. Most often the subject used the dative plural adjective ending [ym] in the modifier, instead of the instrumental adjectival ending [ymy], with the instrumental suffix [amý] in the noun, e.g. z červonym (dative) daxamy (instrumental) 'with red roofs'.

4. Surprisingly, there were practically no occurrences of the use of the nominative. Instead, in

the grammatical permutation task, the subject used the genitive four times, either in the full noun phrase or in part of the noun phrase, e.g. vin tancjuje z pohanoji (genitive) divčyny (genitive) 'he dances with an ugly girl' instead of z pohanoju divčynoju (instrumental). Preposition z governs both genitive and instrumental cases.

TABLE 9C
LOCATIVE
(Percent correct)

#T	Uncontrolled					Controlled		Total %C
	I	C	PS	C	PS	TR	GP	
U	11	7	5	1	5	24	24	77
C	9	6	1	0	3	12	2	33 43%

The locative in Ukrainian is used only with prepositions and is occasionally referred to as the prepositional case. All locative expressions in this study were used with prepositions u 'in' and na 'on', the most commonly used prepositions with the locative case. As seen in Table 9C, the errors were mostly found in the grammatical permutations. The incorrect usage had the following distribution:

1. The use of the nominative/accusative, i.e. the citation form which can be considered either nominative or accusative, e.g. žyvut 'u velyke (nominative

/accusative) misto (nominative/accusative) '(they) live in a big city' and the use of the accusative suffix [u] in singular feminine nouns, e.g. vona sydyt' na kanapu (accusative) 'she is sitting on the couch' instead of na kanapi (locative). Since prepositions u/na govern the accusative as well as the locative, these errors are easily explainable.

2. The use of the genitive, e.g. u velykoji (genitive) tjurmy (genitive) 'in a big prison' instead of u velykij tjurmi (locative). Genitive inflections are indirectly linked with the locative since both the genitive and the locative have underlying relationships with the accusative through the use of prepositions and the animate vs. inanimate distinction.

3. The use of the instrumental, especially in the grammatical permutation task, e.g. na harnym (instrumental) viknom (instrumental) 'on a nice window', na šyrokyx valax (instrumental) valamy (instrumental) 'on wide walls' instead of na harnim vikni (locative), na šyrokyx valax (locative). The use of the instrumental instead of the locative seems to be "idiosyncratic" and not easily explainable.

TABLE 11C

Vowel Alternations [i~o, i~e], Vowel Deletion,
and Palatalization,
Percent correct (total number of tokens)

Vowel Alternation	[i~o]	88%	(24)
Vowel Deletion		72%	(25)
Vowel Alternation	[i~e]	25%	(24)
Palatalization	Locative	8%	(24)
	Vocative	4%	(24)
Total		40%	(121)

Vowel Alternations and Vowel Deletion

In the translation and grammatical permutation tasks, the areas of special difficulty involving vowel alternations and vowel deletion were tested in both forward and back formations, i.e. singular to plural permutations and vice versa, as well as in nominative to genitive and nominative to instrumental permutations. The results were as follows:

The subject performed quite well on the [i~o] alternation. In fact, there were only three errors in this area. In incorrect usage, the subject either simply used the nominative singular as in the word viz 'wagon', which the subject failed to pluralize, or else she used a diminutive form which does not undergo a vowel change, e.g. vizka (genitive) instead of voza.

Many more errors were found in the [i~e]

alternation. The errors were encountered in the citation form as well as in oblique cases. Thus, for example, in the grammatical permutations task, the subject failed to make the vowel shift from [e] to [i] in backforming singular from plural, e.g. koren' 'root' from koreni and hreben' 'comb' from hrebeni instead of korin' and hrebin'. In most instances, however, the subject failed to change the vowel [i] to [e] in forming plural and oblique cases, e.g. lebidy (plural) 'swans' instead of lebedi, kaminja (genitive) 'stone' instead of kamenja, z lidom (instrumental) 'with ice' instead of z ledom. In some cases the vowel [i] was changed to [y] instead of [e], e.g. vedmydy (plural) 'bears', papyry (plural) 'papers' instead of vedmedi, paperi.

I should also point out that the number of correct answers in areas of special difficulty would be smaller if I were to include all types of errors instead of looking only at the specific changes which I was testing. Note that in all other paradigms I looked at the whole noun phrase and marked it incorrect in case any part of it was incorrect.

Palatalization

In the translation task, there were 12 words requiring palatalization. Of the 12 expressions, the subject used 11 in the nominative case. Only one phrase 'Bože mij' 'my God' contained the vocative suffix

[e] and underwent the proper sound change. In the grammatical permutation task, not one expression was correct. Four expressions were in the nominative, e.g. molodyj čumak (nominative) 'traveler', ljutyj vrah (nominative) 'vicious enemy', pastux (nominative) 'shepherd' instead of čumače, vraže, pastuše. Six expressions contained the inflection [u], which is an alternate vocative suffix used with some lexical items, e.g. kozaku 'Kozak', druhu 'friend', patrijarchu 'patriarch' instead of kozače, družę, patrijarše. Thus, the subject either used the citation form or supplied inflections which do not require sound changes.

Palatalization in singular locative before the vowel [i] changes [k, h, x] to [c, z, s]. Only two expressions 'na dorozii' 'on the road' and 'na pidlozi' 'on the floor' were correct. In the rest of the examples, the subject avoided the context requiring the sound change by using the nominative, e.g. na berih 'on the shore' instead of na berezi, or using such suffixes as [u], e.g. v knyžku 'in the book', [om], e.g. v poroxom 'in the dust', [a], e.g. na kapeljuxa 'on the hat' instead of v knyžci, v porosi, na kapeljusi. There was one expression in which the subject supplied the locative suffix [i] without palatalizing the consonant, e.g. 'na berehi' 'on the riverbank' instead of 'na berezi'.

COMPARISON OF THE USE AND ACCURACY OF INFLECTIONAL
MORPHOLOGY IN UKRAINIAN ACROSS THE THREE SUBJECTS
(All Tasks)

TABLE 12

Gender Agreement in Singular Nominative Noun Phrases (NP)
and Subject/Past Tense Verbs (PV)
Percent correct (total number of tokens)

		Subject 1	Subject 2	Subject 3	Total
NP	F	73% (26)	66% (38)	81% (31)	73% (95)
	M	55% (22)	69% (29)	92% (25)	72% (76)
	N	42% (12)	15% (13)	0% (9)	21% (34)
Subtotal		60% (60)	59% (80)	74% (65)	64% (205)
PV	M	90% (61)	91% (97)	100% (38)	92% (196)
	F	92% (118)	92% (132)	93% (104)	92% (354)
	N	60% (20)	68% (19)	59% (22)	62% (61)
Subtotal		88% (199)	90% (248)	90% (164)	89% (611)
Total		81% (259)	82% (328)	86% (229)	83% (816)

Key: M = Masculine F = Feminine N = Neuter

TABLE 13

Number Agreement in Subject/Past Tense Verbs (PV)
and Nominative Plural Noun Phrases (NP)
Percent correct (total number of tokens)

		Subject 1	Subject 2	Subject 3	Total
PV		98% (62)	100% (55)	92% (51)	97% (168)
NP		37% (38)	39% (36)	51% (45)	43% (119)
Total		75% (100)	76% (91)	73% (96)	75% (287)

TABLE 14

Oblique Cases
Percent correct (total number of tokens)

	Subject 1	Subject 2	Subject 3	Total
A	58% (125)	47% (135)	54% (155)	53% (415)
I	32% (57)	24% (59)	49% (65)	35% (181)
V	41% (51)	16% (50)	42% (48)	33% (149)
L	23% (77)	28% (92)	43% (77)	31% (246)
G	27% (113)	25% (115)	39% (107)	30% (335)
D	8% (50)	14% (50)	13% (53)	12% (153)
T	35% (473)	30% (501)	43% (505)	36% (1479)

Key: A = Accusative L = Locative
 I = Instrumental G = Genitive T = Total
 V = Vocative D = Dative

TABLE 15

Summary of Incorrect Case Substitution
Percent correct (total number of tokens)

	Subject 1	Subject 2	Subject 3	Total	
C A S E U S E D	N*	78% (184)	73% (175)	46% (89)	67% (448)
	G	12% (28)	6% (15)	18% (35)	12% (78)
	I	6% (13)	6% (14)	18% (35)	9% (62)
	A	1% (3)	10% (23)	10% (20)	7% (46)
	L	3% (6)	2% (5)	7% (14)	4% (25)
	D	1% (2)	3% (8)	1% (2)	2% (12)
	V	0% (0)	0% (0)	0% (0)	0% (0)

*Case substitutions in which citation forms were used were counted as nominative

TABLE 16

Uncontrolled vs. Controlled Tasks
Percent correct (total number of tokens)

	Subject 1	Subject 2	Subject 3	Total	
U N C O N T R O L L E D	PV # Agr.	97% (39)	100% (36)	95% (21)	98% (96)
	PV Gender	91% (175)	92% (224)	92% (140)	91% (539)
	Agr.				
	NP Gender	72% (36)	71% (56)	79% (43)	74% (135)
	Agr.				
	NP # Agr.	50% (14)	58% (12)	76% (21)	64% (47)
	Accus.	62% (77)	59% (87)	62% (107)	61% (271)
	Locative	41% (29)	48% (44)	66% (29)	51% (102)
	Genitive	40% (65)	42% (67)	61% (59)	47% (191)
	Instr.	33% (9)	27% (11)	53% (17)	41% (37)
	Vocative	33% (3)	50% (2)	0% (0)	40% (5)
	Dative	50% (2)	0% (2)	40% (5)	33% (9)
	Total	63% (325)	63% (363)	69% (333)	65% (1021)
C O N T R O L L E D	PV # Agr.	100% (8)	100% (8)	88% (8)	96% (24)
	PV Gender	71% (24)	71% (24)	79% (24)	74% (72)
	Agr.				
	NP Gender	42% (24)	29% (24)	63% (24)	44% (72)
	Agr.				
	Accus.	50% (48)	27% (48)	38% (48)	38% (144)
	Vocative	42% (48)	15% (48)	42% (48)	33% (144)
	NP # Agr.	29% (24)	29% (24)	29% (24)	29% (72)
	Instr.	31% (48)	23% (48)	27% (48)	27% (144)
	Locative	13% (48)	10% (48)	29% (48)	17% (144)
	Dative	6% (48)	15% (48)	10% (48)	10% (144)
	Genitive	10% (48)	2% (48)	13% (48)	8% (144)
	Total	31% (368)	23% (368)	34% (368)	29% (1104)

TABLE 17

Areas of Special Difficulty
Percent correct (total number of tokens)

	Subject 1	Subject 2	Subject 3	Total
VA [i~o]	79% (24)	70% (27)	87% (24)	79% (75)
VD	58% (26)	41% (32)	72% (25)	55% (83)
VA [i~e]	28% (25)	31% (26)	26% (24)	28% (75)
PV	16% (25)	8% (24)	4% (24)	10% (73)
PL	0% (28)	7% (30)	8% (24)	5% (82)
Total	35% (128)	32% (139)	40% (121)	35% (388)

Key: VA = Vowel Alternation PV = Palatalization
 VD = Vowel Deletion in vocative
 PL = Palatalization
 in locative

TABLE 18

Unmarked* vs. Marked Forms in Vowel Alternations
and Vowel Deletion

Percent correct (total number of tokens)

	Subject 1	Subject 2	Subject 3	Total
Vowel Alt. [i]	100% (8)	100% (8)	100 (8)	100% (24)
[o]	69% (16)	58% (19)	81% (16)	69% (51)
Vowel Del V	63% (8)	91% (11)	88% (8)	81% (27)
VD	61% (18)	43% (21)	65% (17)	55% (56)
Vowel Alt. [i]	50% (8)	88% (8)	50% (8)	63% (24)
[e]	24% (17)	6% (18)	31% (16)	20% (51)

Key: V = Vowel present
 VD= Vowel deleted

*Unmarked forms - citation forms in vowel alternations (contain vowel [i]) and in vowel deletion (contain vowel).

Discussion

In spite of some variation from task to task and subject to subject, no appreciable differences in the results were found across the three subjects. The frequency as well as the types of errors were consistently very similar. In fact, there were several identical incorrect expressions which were encountered in the production of each of the three subjects. These similarities in the Ukrainian interlanguage of all three subjects cannot be attributed to mutual influence since they always speak German among themselves.

Thus, on the basis of the analysis of the subjects' morphological interlanguage systems in Ukrainian, we can make the following generalizations:

1. Gender and Number Agreement

a. The inflectional accuracy of gender agreement depended on the gender involved rather than on the task and the subject. Thus, the inflectional accuracy for expressions requiring masculine and feminine gender agreement was higher than it was for neuter noun phrases. This was true for both noun phrase gender agreement (feminine 73% (95), masculine 72% (76), neuter 21% (34)) as well as gender agreement between subjects and past tense verbs (feminine 92% (354), masculine 92% (196); neuter 62% (61)).

b. The subjects evidenced greater difficulty in

noun phrase than in past tense verb inflectional morphology. This was reflected in a lesser production accuracy in gender agreement in noun phrases (feminine 73% (95), masculine 72% (76), neuter 21% (34)) as compared with gender agreement between subjects and past tense verbs (feminine 92% (354), masculine 92% (196), neuter 62% (61)). The same was true for number agreement, i.e. the inflectional morphology was less accurate in noun phrases (43% (119) than in verb phrases (97% (168)).

c. Masculine and feminine nouns in the nominative case were used correctly practically without exception. The errors in gender agreement resulted from faulty use of modifiers, e.g. incorrect gender, number and case. In neuter nouns there was a general tendency to overgeneralize the feminine gender inflection [a] to singular nouns and the masculine/feminine plural inflection [y] to plural neuter nouns. The [y] inflection was also used in adjectives modifying nouns, especially plural nouns, as well as in masculine and feminine nouns which normally take the suffix [i].

2. Case morphology

a. The production accuracy of the inflectional morphology was lower in oblique cases, i.e. (accusative 53% (415), instrumental 35% (181), vocative 33% (149),

locative 31% (246), genitive 30% (335), dative 12% (153)) than it was in expressions requiring gender agreement (83% (816)) and number agreement, i.e. nominative plural (75% (287)). This supports the view that the most difficult aspect in uninstructed adult SLA of inflectional morphology involves case morphology.

b. The case that was most often substituted in place of the appropriate oblique case was the nominative (67% (448)). The reverse was not true. There were practically no instances in which an oblique case was used in place of the nominative.

c. The oblique cases which were most often confused with each other were: (1). cases which are underlyingly related to each other, e.g. genitive and accusative which have an underlying relationship through the animate/inanimate and affirmative/negative distinction (2). cases which have a phonetic proximity in their inflectional markings, e.g. dative and instrumental cases in plural (3). cases which are governed by the same prepositions. Some prepositions govern more than one case, e.g. genitive and instrumental, accusative and locative, and case errors reflected this fact since the subjects often used cases which, although inappropriate, are possible in a different context. This gives evidence that the subjects' interlanguage is systematic and rule-governed and the result of definite

learning strategies.

3. Uncontrolled vs. Controlled Testing

Contrary to our expectations, the level of accuracy of inflectional morphology was higher in spontaneous production (65% (1021)) than in controlled testing (29% (1104)). This was probably partly due to avoidance and paraphrase possibilities in spontaneous production. Also, the subjects often used only the noun in the spontaneous part of the testing, whereas in the translation and grammatical permutation tasks nouns plus one or two modifiers were used. In addition, the fact that these were uninstructed learners without the possession of explicit grammatical rules most probably had a bearing on this outcome. Thus, it seems that these subjects did not avail themselves of the possibility to monitor their output. It would be interesting to see if the results would be similar under conditions of instruction.

4. Areas of Special Difficulty

a. The data indicate that some areas of special difficulty were more easily acquired than others. Thus, the subjects' performance was better than expected in vowel alternations and vowel deletion, i.e. [i~o] alternation (79% (75)), vowel deletion (55% (83)) and [i~e] alternation (28% (74)). The relatively high degree

of accuracy of vowel alternations and vowel deletion is most probably due to a positive L1 transfer. The presence of umlaut in the grammar of the German language which, changes the vowels [a, o, u], and the diphthong [au] to [ä, ö, ü] and [äu] respectively in certain linguistic environments, facilitates the acquisition of structures requiring vowel change since German speakers already possess the concept of such change. Additionally, vowel modification is quite pervasive in the Ukrainian grammar and is found not only in most oblique cases, but also in the plural nominative. The higher than expected accuracy of these special forms appears to be in support of findings by Bardovi-Harlig (1987) who reports that salience, defined as the availability of data, 'disrupts' the acquisitional sequence of preposition stranding construction predicted by markedness.

b. The degree of difficulty in the area of palatalization was very high, as reflected in the low degree of accuracy in the subjects' production of palatalized forms (vocative 10% (73)*, locative 5% (83)). This is an indication that marked structures present considerable acquisitional difficulties if there is no

*All palatalized vocative forms require the addition of the morpheme [e], whereas in regular vocative paradigms citation forms are used for singular neuter as well as plural noun phrases.

positive L1 transfer and if the salience of the construction is not very high.

c. There is evidence that there are varying degrees of difficulty within the same structure, i.e. the subjects had far less difficulty with the [i ~ o] vowel alternation (79% (75)) than they did with the [i ~ e] alternation (28% (74)) although the two types of vowel alternation are found in similar environments and undergo changes under similar conditions. Again, this could be a case where structures which are phonetically similar are more difficult to acquire than those that are more dissimilar.

d. Table 18 indicates that the degree of correctness is considerably higher for unmarked forms than it is for marked forms (unmarked forms in: [i ~ o] alternation 100% (24), vowel deletion 81% (27), [i ~ e] alternation 63% (24) vs. marked forms in: [i ~ o] alternation 69% (51), vowel deletion 55% (56), [i ~ e] alternation 20% (51). This supports the claim that marked structures are more difficult to acquire than their unmarked counterparts by adult second language learners.

5. General Remarks

a. The data suggest creative rule formation on the part of the subjects. This is especially evident in gender and number agreement. Thus, for example, when the

subjects coined new words, used English nouns with Ukrainian modifiers and added feminine inflections to neuter nouns, they consistently provided gender and number agreement according to the rules of the target language.

b. Although there is some evidence of L1 transfer, the inflectional errors found in this study are mostly errors of overgeneralization and involve the incorrect use of the rules inherent to the Ukrainian language. Thus, for example, errors in gender agreement resulted from overgeneralization, and did not correspond to the gender used in German. Additionally, there was no difference in inflectional accuracy between the cases which are found in both the Ukrainian and German languages and those found only in Ukrainian. The latter can be at least partly accounted for by the fact that inflectional morphology in German is marked primarily on the article and only in much reduced form on adjectives and nouns, and since there are no articles in Ukrainian, no direct influence is possible.

c. The data indicate that all subjects used avoidance and paraphrase strategies. This was evident, for example, in: (1). the subjects' use of alternate inflections in the vocative and the locative to avoid palatalization (2). the use of prepositions in

the translation task, e.g. using prepositional phrases of location instead of possessive genitive and using prepositions rather than dative case morphology to express indirect relationships (3). using singular in place of plural, a practice which was quite extensive with all subjects, but especially subjects 1 and 2.

d. Evidence was found to suggest that structures which are phonetically close are confusing and thus more difficult to acquire. This was seen in the extensive overgeneralization of the noun plural morpheme [y] to environments requiring [e], [i] and [yj] morphemes, in adding [a] to singular neuter nouns (feminine nouns possess the morpheme [a] in the singular and neuter nouns possess the morpheme [a] in the plural). Additional evidence comes from the discrepancy in the accuracy rates between [i~o] and [i~e] vowel alternations. The accuracy rate for [i~o] is considerably higher than it is for [i~e] although these vowel changes occur under similar conditions.

CHAPTER 6

ANALYSIS OF THE ENGLISH DATA

Chapter 6 presents the analysis of the English data for each morphological structure under investigation, including the allomorphs. As with the Ukrainian data, the number and nature of each error was noted and the accuracy rates were expressed in terms of percentages.

SUBJECT 1

TABLE 19A

		Plural - % correct								
		Uncontrolled					Controlled			
		oral			written		written			
	#T	I	C	PS	C	PS	TR	GP	Total	%C
[z]/	U	12	23	3	10	1	4	4	57	
	C	12	23	3	10	1	4	4	57	100%
[s]	U	6	9	0	0	1	4	4	24	
	C	6	9	0	0	1	4	4	24	100%
[Iz]	U	1	2	0	0	0	4	4	11	
	C	1	2	0	0	0	4	4	11	100%

Key: T = Token	I = Interview	TR= Translation
U = Used	C = Cinderella	GP= Grammatical
C = Correct	PS= Picture Story	Permutations

TABLE 20A

Possessive - % correct

		Uncontrolled					Controlled			
		oral			written		written			
	#T	I	C	PS	C	PS	TR	GP	Total	%C
[z]	U	0	3	0	1	0	4	4	12	
	C	0	3	0	1	0	4	4	12	100%
[s]	U	0	0	0	0	0	4	4	8	
	C	0	0	0	0	0	4	4	8	100%
[Iz]	U	0	0	0	0	0	4	4	8	
	C	0	0	0	0	0	4	4	8	100%

TABLE 21A

Past Tense - % correct

		Uncontrolled					Controlled			
		oral			written		written			
	#T	I	C	PS	C	PS	TR	GP	Total	%C
[d]	U	4	7	2	3	0	4	4	24	
	C	4	7	2	3	0	4	4	24	100%
[t]	U	0	4	2	2	1	4	4	17	
	C	0	4	2	2	1	4	4	17	100%
[Id]	U	2	3	0	4	0	4	4	17	
	C	2	3	0	4	0	4	4	17	100%

TABLE 22A

		Past Participle - % correct								
		Uncontrolled					Controlled			
		oral			written		written			
	#T	I	C	PS	C	PS	TR	GP	Total	%C
[d]	U	2	3	0	1	2	4	4	16	
	C	2	3	0	1	2	4	4	16	100%
[t]	U	0	0	0	1	1	4	4	10	
	C	0	0	0	1	1	4	4	10	100%
[Id]	U	2	0	1	0	2	4	4	13	
	C	2	0	1	0	2	4	4	13	100%

As can be seen from Tables 19A, 20A, 21A and 22A, the results were correct in most instances, i.e. most of the time the subject supplied the appropriate plural, possessive, past and past participle inflections. In more detail, the results were as follows:

1. All plural inflections were correct. There were no errors of any kind throughout the testing tasks, either in forward formation, i.e. forming plural from singular, or in back formation, i.e. forming singular from plural.

2. The use and accuracy of possessive suffixes were tested mostly in controlled testing since not many expressions requiring the use of the possessive were used in spontaneous speech. As Table 20A indicates,

there were no errors in the use and accuracy of the possessive morphemes.

3. The use of the past tense morpheme was mostly correct. The only verb which did not contain the past tense inflection was the verb 'ask' in the translation task which the subject translated as 'had ask'

4. All past participles contained appropriate suffixes in obligatory contexts.

5. The subject's production contained several spelling errors, i.e. the type of errors often made by native speakers of English. The spelling errors were as follows:

a. In possessive requiring the [Iz] allomorph, the subject used plural rather than possessive suffixes, e.g. in the expressions 'Mr. Berlitzes student' and 'the witches broom', the subject added -es rather than 's. In addition, throughout the written component of the test, the subject did not use the apostrophe consistently to signal the possessive inflection. In fact, only in two expressions, 'the man's coffee' and 'his father's property', was the apostrophe used.

b. There was one spelling error in the use of the past tense morpheme, i.e. the verb 'discover' was incorrectly spelled 'discoverd'.

SUBJECT 2

TABLE 19B

Plural - % correct

		Uncontrolled					Controlled			
		oral			written		written			
	#T	I	C	PS	C	PS	TR	GP	Total	%C
[z]	U	15	12	8	9	2	4	4	54	
	C	15	12	8	9	2	4	4	54	100%
[s]	U	3	0	3	0	0	4	4	14	
	C	3	0	3	0	0	4	4	14	100%
[Iz]	U	3	2	0	3	0	4	4	16	
	C	2	2	0	3	0	4	4	15	94%

TABLE 20B

Possessive - % correct

		Uncontrolled					Controlled			
		oral			written		written			
	#T	I	C	PS	C	PS	TR	GP	Total	%C
[z]	U	4	0	0	4	0	4	4	16	
	C	4	0	0	4	0	4	4	16	100%
[s]	U	0	0	1	0	0	4	4	9	
	C	0	0	1	0	0	4	4	9	100%
[Iz]	U	0	0	0	0	0	4	4	8	
	C	0	0	0	0	0	4	4	8	100%

TABLE 21B

		Past Tense - % correct									
		Uncontrolled				Controlled					
		oral		written		written					
	#T	I	C	PS	C	PS	TR	GP	Total	%C	
[d]	U	5	13	7	6	5	4	4	44		
	C	5	13	7	6	5	4	4	44	100%	
[t]	U	2	8	2	3	1	4	4	24		
	C	2	8	1	3	1	4	4	23	96%	
[Id]	U	1	1	2	5	0	4	4	17		
	C	1	1	2	5	0	4	4	17	100%	

TABLE 22B

		Past Participle - % correct									
		Uncontrolled				Controlled					
		oral		written		written					
	#T	I	C	PS	C	PS	TR	GP	Total	%C	
[d]	U	4	1	0	5	0	4	4	18		
	C	4	1	0	5	0	4	4	18	100%	
[t]	U	2	1	2	2	0	4	4	15		
	C	2	1	2	2	0	4	4	15	100%	
[Id]	U	7	0	1	1	0	4	4	17		
	C	7	0	1	1	0	4	4	17	100%	

The subject's use of plural and possessive morphemes for nouns as well as past tense and past participle morphemes for verbs was predominantly correct, except for

spelling. The error distribution was as follows:

1. All the nouns, with one exception, contained the plural morpheme in obligatory contexts. The one exception appeared in the phrase 'in many instance' in which the noun instance was not pluralized. The back formation of singular from plural was totally correct.

2. The possessive morpheme was used correctly in all obligatory contexts.

3. The past tense morpheme was supplied correctly in all affirmative expressions across all the written tasks. In the oral production, the expression 'she notice' did not contain the past tense suffix as required by the context. There was one additional error when the subject used the past tense morpheme with a negative expression, i.e. 'did not wanted'.

4. The past participle suffix was used correctly in all expressions requiring the use of past participles.

5. Spelling errors were of the following types:

a. The use of the apostrophe with the plural morpheme was found in all written tasks. The subject thus used the orthographical convention for possessive in singular nouns when writing plural noun phrases, e.g. several boy's, two cat's, brown chair's instead of boys, cats, chairs. It should be pointed out that this type of error occurred with the [z] and [s] allomorphs, but not

with the [Iz] allomorph, i.e. the subject did not use the apostrophe if the pluralization of a noun called for addition of -es instead of -s.

b. In possessives, the use of the apostrophe was not consistent. The subject used the apostrophe in some cases, but not in others, e.g. the cook's salary, your aunt's coat, but 'my uncles car', 'his brothers watch'. Moreover, the subject added -es to nouns which normally take -es in plural, e.g 'the witches broom'.

c. In the past participle, the words died and tried were spelled 'diyed' and 'tryed'.

SUBJECT 3

TABLE 19C

Plural - % correct

		Uncontrolled					Controlled			
		oral			written		written			
#T	I	C	PS	C	PS	TR	GP	Total	%C	
[z]	U	21	6	5	11	4	4	4	55	
	C	20	6	5	11	4	4	4	54	98%
[s]	U	1	0	2	0	3	4	4	14	
	C	1	0	1	0	3	4	4	13	93%
[Iz]	U	3	1	0	0	1	4	4	13	
	C	3	1	0	0	1	4	4	13	100%

TABLE 20C

		Possessive - % correct									
		Uncontrolled					Controlled				
		oral			written		written				
	#T	I	C	PS	C	PS	TR	GP	Total	%C	
[z]	U	0	1	0	4	0	4	4	13		
	C	0	1	0	4	0	4	4	13	100%	
[s]	U	0	0	0	0	1	4	4	9		
	C	0	0	0	0	1	4	4	9	100%	
[Iz]	U	1	0	0	0	0	4	4	9		
	C	1	0	0	0	0	4	4	9	100%	

TABLE 21C

		Past Tense - % correct									
		Uncontrolled					Controlled				
		oral			written		written				
	#T	I	C	PS	C	PS	TR	GP	Total	%C	
[d]	U	7	7	8	7	4	4	4	41		
	C	7	7	8	7	4	4	4	41	100%	
[t]	U	3	3	4	4	1	4	4	23		
	C	3	3	4	4	1	4	4	23	100%	
[Id]	U	2	0	0	5	0	4	4	15		
	C	2	0	0	5	0	4	4	15	100%	

TABLE 22C

		Past Participle - % correct								
		Uncontrolled				Controlled				
		oral		written		written				
	#T	I	C	PS	C	PS	TR	GP	Total	%C
[d]	U	10	1	1	1	0	4	4	21	
	C	10	1	1	1	0	4	4	21	100%
[t]	U	0	0	1	0	1	4	4	10	
	C	0	0	1	0	1	4	4	10	100%
[Id]	U	0	0	1	1	0	4	4	10	
	C	0	0	1	1	0	4	4	10	100%

In examining the collected data, we note that the subject provided proper plural, possessive and past tense inflections almost without exception. This was true across the board regardless of the testing procedure used. In fact, there were only two morphological errors which were found in the use of the plural in oral production. One of these involved a lack of the plural suffix in the phrase 'these sort of things', and the other contained a plural inflection in an inappropriate context in the phrase 'on the first lessons'.

Other errors involved spelling rather than a lack of inflections or improper inflections. Possessives, examined exclusively for singular nouns, were treated as plural and contained no apostrophes, e.g. 'the boys

hands', 'his fathers property', 'Mr. Berlitzes student'. Only in the grammatical permutation task, was the apostrophe used, but not consistently.

In using the past tense and past participle, the subject made a few errors in spelling, such as 'stoped', 'discoverd', 'happend', 'heared'.

COMPARISON OF THE USE AND ACCURACY OF INFLECTIONAL MORPHOLOGY IN ENGLISH ACROSS THE THREE SUBJECTS

The results of the data analysis reveal many similarities and only slight differences in the interlanguages of the three subjects, e.g.

1. The subjects made only occasional errors in the area of noun and past tense verb inflectional morphology so that their interlanguage closely approximated target use. The types of errors found in the subjects' interlanguage most often involved spelling rather than morphology.

2. All the subjects had the same types of spelling errors in using the possessive: a. they added -es rather than 's in the [Iz] possessive allomorph, e.g. 'the witches broom' b. they did not use the apostrophe consistently.

3. All three subjects had some spelling errors in the use of past tense verbs, e.g. adding -d instead of -ed, as in 'discoverd'; failure to double the consonant,

as in 'stoped', and failure to change y to i as, as in 'tryed'.

4. Subject 2 was the only one who used the apostrophe in plural morphemes, e.g. 'two big cat's', and who added an -ed suffix with the verb in the negative, i.e. 'did not wanted'.

5. The subjects did not manifest a clear-cut distinction between the [z] and [s] allomorphs in the oral testing component, e.g. they sometimes used the [z] allomorph and sometimes they pronounced it as an [s]. The same lack of distinction was noted in past tense and past participle allomorphs [d] and [t]. This resulted in a slight 'foreign accent'. This pronunciation error could be explained as L1 transfer since the grammar of the German language possesses a phonological rule devoicing all final obstruents.

CHAPTER 7

CONCLUSIONS

Experimental Conclusions

The results of this research give evidence in support of the two hypotheses advanced in this study. The first hypothesis deals with language transfer, and the second hypothesis deals with the markedness theory. Both issues have been widely debated in SLA.

Hypothesis I

There is overwhelming evidence supporting my first hypothesis which states that the Acquisitional Direction of Complexity, i.e. the relationship between the complexity of the inflectional morphology in the subject's first language and the target language, is a crucial variable in uninstructed adult SLA.

It was predicted that the learners would find it more difficult to go from a less complex to a more

complex inflectional system, whereas going from a more complex to a less complex system would be relatively easy. The claim was thus made that the learners would find it easier to acquire English, which is inflectionally simpler than German, the subjects' first language, than it would be to acquire Ukrainian, which is inflectionally more complex than either English or German. This acquisitional difference would be reflected in the subjects' production which, it was predicted, would contain many more errors in inflectional morphology in Ukrainian than in English, across all subjects and all testing procedures, both controlled and uncontrolled, oral and written.

The results reveal that the subjects' production differed greatly in the two target languages. As predicted, the subjects made many more errors in Ukrainian than in English. This was true for all the structures under analysis where interlanguage comparison was possible, i.e. singular, plural, case and regular past tense inflectional morphology. This was also true for all types of testing and across all the subjects.

The subjects' acquisition of inflectional morphology in English was practically complete. This was reflected in the production of plural and possessive noun suffixes as well as past tense and past participle verb suffixes,

which were practically error-free. The errors found in the subjects' production in English were mostly pronunciation and spelling errors. The spelling errors, i.e. the types of errors often found in the production of native speakers of English, involved mainly the lack of an apostrophe in possessives, whereas pronunciation errors involved the final devoicing of the [z] to [s] allomorph in plural and possessives and the devoicing of [d] to [t] allomorph in the past tense morpheme, resulting in a slight 'foreign accent'. This is in accord with the phonological rule in the German language devoicing final obstruents.

The subjects' interlanguage system in Ukrainian, on the other hand, contained many errors and indicates that the subjects' inflectional morphology may have fossilized much earlier than their English interlanguage. The only structure which approached target-like accuracy was the verbal inflectional system in the past tense. The noun phrase inflectional morphology, especially case morphology, was far below standard usage. The analysis also indicates that although there was some L1 transfer as far as inflectional structures are concerned, most errors stem from such universal learning strategies as overgeneralization and simplification of the structures in the target language.

Thus, the findings reveal that L1 transfer is a significant factor in naturalistic adult SLA of inflectional morphology. This positive or negative L1 transfer involves the relationship of the inflectional systems of the native language and the target language, rather than individual morphemes. The Acquisitional Direction of Complexity either facilitates or impedes the second language learning process. It seems that under proper affective and social conditions going from a more complex to a less complex morphological linguistic system mere exposure and self-study are sufficient to acquire inflectional morphology fully. If the morphological system of the target language is more complex than that of the first language, exposure is a necessary but not a sufficient condition for the successful acquisition of the target language in terms of acquiring not only communicative competence but also inflectional accuracy. It might be conjectured that an interplay between exposure to the target language, with ample opportunities to use it for communicative purposes, and instruction, i.e. deliberate attention to rules governing the target language would lead to a more complete acquisition of grammatical inflections in Ukrainian.

Hypothesis 2

The evidence for my second hypothesis, which deals

with Markedness Theory, is not as clear-cut for some of the paradigms being tested. In some areas of special difficulty, namely vowel alternations (especially the alternation of [i ~ o]) and vowel deletion, the subjects' performance was much better than expected. This improved performance was probably due to a positive L1 transfer of the umlaut phenomenon in German which modifies vowels under certain conditions. The notion of vowel change which German speakers possess may have had a facilitating effect on the acquisition of vowel alternations and vowel deletion in Ukrainian. The results might have been additionally influenced by the high degree of salience of these structures which, according to the findings of Bardovi-Harlig (1987), can affect the acquisitional sequence of unmarked vs. marked forms.

In spite of the fact that the accuracy rate for vowel alternations and vowel deletion was better than expected, this study provides support for the claim that markedness is an important factor in SLA and that marked forms in the realm of inflectional morphology are not as easily acquired as unmarked forms by uninstructed adult second language learners. My conclusion that markedness is an effective predictor of ease and difficulty in SLA is based on the following findings: the low accuracy rate in the subjects' production of palatalized forms in

the vocative and locative cases, the discrepancy in the results between marked and unmarked forms in vowel alternations and vowel deletion, the predominant use of the nominative case in place of oblique cases, and the subjects' preference for singular in place of plural. In more detail, these findings are as follows:

1. The results indicate that the degree of accuracy of palatalized forms in the subjects' production was very low and thus suggest that marked forms are more difficult to acquire. Palatalized forms are marked typologically, i. e. their presence in the language is limited cross-linguistically. They are also marked by virtue of their inherent complexity since they require a consonant change in addition to case morphology. The fact that in areas of special difficulty the researcher examined only the required sound changes and did not include any other morphological errors either in the noun or in the adjective make the results especially significant.

2. There is a great discrepancy in the degree of accuracy between marked and unmarked forms in the area involving vowel alternations and vowel deletion. Unmarked forms, i.e. forms found in the singular nominative case have a higher incidence of correctness than their marked counterparts. The higher accuracy rate

of unmarked forms was reflected in the production of each subject and for each structure being examined.

3. The nominative case was used far more frequently than any other case in incorrect usage involving oblique cases. Additionally, the inflectional accuracy for gender, which involved the use of the singular nominative case, far surpassed the degree of correctness in oblique cases. The nominative case, i. e. the citation form, is the unmarked form in terms of typological markedness and the principle of complexity.

4. The evidence in support of markedness was further strengthened by the subjects' use of the singular in place of the plural. The use of the singular in place of the plural was quite extensive and was found in the speech of all three subjects. Again, the plural is considered to be more marked than the singular because it requires the addition or replacement of an inflection.

In summary, the results indicate that the accuracy rate was significantly lower for marked forms than unmarked forms as reflected in the production of such marked structures as palatalized forms in the vocative and locative, plural and oblique cases in vowel alternations and vowel deletion, as well as case morphology in all noun paradigms. Additionally, the study reveals the subjects' preference for the use of the singular and the nominative case, both of which are

unmarked. These factors give support for the theory of markedness which affirms that marked forms are more difficult to acquire than unmarked forms.

Methodological Conclusions

This study also gives evidence for the need of controlled testing in order to obtain a sufficient number of tokens of structures being studied. Thus, in spite of the fact that five different tasks (three oral and two written) were used in this research to tap the students' spontaneous production, the researcher did not obtain enough data to make the analysis of certain structures possible and to make any comparison across the various tasks meaningful. This was especially true in the areas of special difficulty in which very few tokens were produced spontaneously so that the analysis had to be based almost exclusively on controlled testing.

The need for the inclusion of controlled testing was further reinforced by the finding that some types of errors were revealed only in controlled testing. Such errors, which, I believe, disclose the subjects' use of paraphrasing and avoidance strategies in spontaneous production, included the use of prepositions instead of inflectional morphology to indicate possession and indirect objects, as well as the use of singular when plural was called for.

To summarize, the aforementioned reasons reveal the need for controlled testing. It is evident that researchers cannot rely solely on spontaneous production since even with several testing procedures one might not obtain a sufficient number of tokens for certain structures. Moreover, certain types of structures may appear exclusively in controlled testing due to avoidance strategies used in spontaneous production.

Theoretical Conclusions

This study revolves around several central issues in the field of SLA. It deals extensively with the issue of L1 transfer and markedness, and also touches peripherally on the issues of language input and sociological and psychological distance.

The present study has demonstrated that the complexity of the inflectional system in L1 in relationship to L2 and the principles of markedness are determining factors in uninstructed adult acquisition of inflectional morphology in SLA. Additional studies are needed to determine what other aspects of SLA are influenced by the Acquisitional Direction of Complexity.

This study also supports the view that there is no real dichotomy between the claim that L1 plays a significant role in SLA and those who negate L1 as a significant variable and claim that SLA is solely dependent on such universal strategies as over-

generalization and simplification. The results of this study indicate that both of these forces are at work. There is positive and/or negative transfer of the linguistic system from L1 as it relates to the linguistic system one attempts to acquire. As far as individual structures are concerned, however, the major forces at work are those of universal strategies of over-generalization and simplification. Thus, both L1 transfer and universal strategies are significant variables in SLA and seem to account for both similarities and differences in the production of adult second language learners of different L1 backgrounds.

Moreover, the findings of this research have a bearing on Krashen's input hypothesis and Schumann's acculturation model. Krashen's claim that the learner will acquire a second language if he receives abundant comprehensible and meaningful input, is constrained by the Acquisitional Direction of Complexity. There is also evidence to suggest that socio - psychological proximity to the speakers of the target language does not in itself guarantee successful SLA by uninstructed adult learners. The results of this study indicate that ample comprehensible input and the lack of social and psychological distance may be sufficient for the full mastery of inflectional morphology of the target language

only if it is less complex than the system in the subject's first language. If the inflectional system of the language to be acquired is more complex than that of the learner's L1, comprehensible input and social proximity are sufficient to achieve communicative fluency, but not necessarily grammatical accuracy which is further constrained by the relationship of grammatical complexity between the learner's L1 and the target language. Thus, mere exposure to meaningful and comprehensible input and a lack of social and psychological distance do not guarantee linguistic accuracy in adults who acquire L2 under naturalistic conditions.

This research is, I believe, unique in a number of ways. Previous studies dealing with L1 transfer were based mostly on subjects from different L1 backgrounds acquiring the same language, usually English. This inquiry examines L1 transfer from a different angle in that it bases its analysis on subjects having the same L1, but acquiring two different languages at the same time and under similar naturalistic conditions. In addition, the two target languages under study possess different degrees of inflectional complexity. This made it possible for the researcher to investigate what bearing the directionality of inflectional complexity has on SLA. Moreover, this study investigates a language

with an extensive inflectional morphology which has not been studied much before.

In summary, this study has demonstrated that the predictive power of the Acquisitional Direction of Complexity as well as the principles of markedness have great explanatory potential and can account for both successful and unsuccessful second language acquisition by uninstructed adult learners. It is hoped that this study has broadened our knowledge of SLA by adult learners under naturalistic conditions.

APPENDIX

TESTING

GERMAN to UKRAINIAN - Translation

GENDER

Masculine

Neben der Dame sitzt ein freundlicher alter Herr.
'Next to the lady sits a friendly old man'

Welcher Bleistift ist lang, der schwarze oder der rote?
'Which pencil is long, the black one or the red one?'

Ich bin gross, aber meine Frau ist klein.
'I'm big, but my wife is small'

Er^{''} ist grösser als sein Bruder, aber sein Vater ist der
grösste.
'He is taller than his brother, but his father is the
tallest'

Feminine

Das braune Buch ist nicht gross.
'The brown book is not big'

Das Wasser ist nicht warm, es ist kalt.
'The water isn't warm; it's cold'

Ist die Blume rot oder weiss?
'Is the flower red or white?'

Ist die Tochter schöner als ihre Mutter?
'Is the daughter prettier than her mother?'

Neuter

Es ist heute kalt, aber die Sonne ist warm.
'It's cold today, but the sun is warm'

Deutsches Bier ist gut und französischer Wein ist auch gut.

'German beer is good and French wine is also good'

Ist der See gross oder klein?

'Is the lake big or small?'

Zürich ist eine schöne Stadt in der Schweiz.

'Zurich is a nice city in Switzerland'

NUMBER

Masculine

Dieser Mann wohnt mit seinem Sohn.

'This man lives with his son'

Diese Männer wohnen nicht mit ihren Söhnen.

'These men don't live with their sons'

Diese Uhr kostet zehn Mark.

'This watch costs ten dollars'

Was kosten diese zwei Uhren?

'What do these two watches cost?'

Es gibt hier ein schönes Kloster.

'There is a nice monastery here'

Es gibt hier zwei schöne Klöster.

'There are two nice monasteries here'

Dieser Knabe ist sehr jung.

'This boy is very young'

Diese zwei Knaben sind sehr jung.

'These two boys are very young'

Feminine

Ist deine Schwester sehr traurig?

'Is your sister very sad?'

Sind deine Schwestern sehr traurig?

'Are your sisters very sad?'

Ich habe zwei Hände und jede Hand hat fünf Finger.

'I have two hands and each hand has five fingers'

Das Haus hat vier Wände.
'The house has four walls'

Haben alle Häuser vier Wände?
'Do all houses have four walls?'

Diese Blume ist nicht rot.
'This flower isn't red'

Diese Blumen sind nicht rot.
'These flowers aren't red'

Neuter

Hier und da war ein grosser Baum.
'Here and there was a big tree'

Hier und da waren grosse Bäume.
'Here and there were big trees'

Das ist nicht die Feder, das ist der Bleistift.
'This is not the pen; this is the pencil'

Das sind nicht die Federn, das sind die Bleistifte.
'These are not the pens; these are the pencils'

Ist das kleine Fenster blau oder rot?
'Is the small window blue or red?'

Sind die blauen Fenster gross?
'Are the blue windows big?'

Der weisse Stuhl ist hinter Ihnen.
'The white chair is behind you'

Die weissen Stühle sind hinter Ihnen.
'The white chairs are behind you'

CASES

Genitive

Masculine

Eine Frau kam in den Wartesaal eines alten Arztes.
'A woman came into the waiting room of an old doctor'

Einige Frauen kamen in den Wartesaal der alten Ärzte.
'Several women came into the waiting room of the old doctors'

Hat der Sohn das Vermögen seines Vaters geteilt?
'Has the son divided his father's property?'

Haben die Söhne das Vermögen ihrer Väter geteilt?
'Have the sons divided their fathers' property?'

Die Hände des Burschen sind gross.
'The boy's hands are big'

Sind die Hände der Burschen gross?
'Are the boys' hands big?'

Das Fenster des Klosters war nicht offen.
'The window of the monastery wasn't open'

Die Fenster der Klöster waren nicht offen.
'The windows of the monasteries weren't open'

Feminine

Was hat die Mutter in der Tasche ihrer Tochter gefunden?
'What did the mother find in her daughter's bag?'

Was haben die Mütter in den Taschen ihrer Töchter gefunden?
'What did the mothers find in their daughters' bags?'

Ist das Dach des weissen Hauses rot?
'Is the roof of the white house red?'

Sind die Dächer der weissen Häuser rot?
'Are the roofs of the white houses red?'

Die Eltern der Mädchen sind sehr alt.
'The girls' parents are very old'

Der Umschlag des Buches ist nicht blau.
'The cover of the book isn't blue'

Wieviele Bilder sind an den Wänden des Raumes?
'How many pictures are there on the walls of the room?'

Wieviele Bilder sind an den Wänden der Räume?
'How many pictures are there on the walls of the rooms?'

Neuter

Am Ufer des Meeres ist ein schönes Haus.
'On the shore of the sea there is a nice house'

Am Ufer der Meere sind schöne Häuser.
'On the shore of the seas there are nice houses'

Ich gehe zum ältesten Mann des Dorfes.
'I go to the oldest man in the village'

Wir gehen zu den ältesten Männern der Dörfer.
'We go to the oldest men in the villages'

Sind hier gute Hotels im Zentrum der Stadt?
'Are there good hotels in the center of the city?'

Sind hier keine guten Hotels im Zentrum der Städte.
'There aren't any good hotels in the center of the cities'

Ich habe nicht die blaue Feder.
'I don't have the blue pen'

Ich habe nicht die blauen Federn.
'I don't have the blue pens'

Dative

Masculine

Meinem ältesten Sohn gebe ich das Buch.
'To my oldest son I give the book'

Meinen Söhnen gebe ich die Bücher.
'To my sons I give the books'

Haben Sie dem alten Mann seine Schuhe gegeben?
'Did you give the shoes to the old man?'

Haben Sie den alten Männern die Schuhe gegeben?
'Did you give the shoes to the old men?'

Welchem Knaben hat er Geld gegeben?
'To which boy did he give money?'

Welchen Knaben hat er Geld gegeben?
'To which boys did he give money?'

Er gibt seinem Schüler ein Buch.
'He gives his student a book'

Der Lehrer gibt seinen Schülern Bücher.
'The teacher gives his students books'

Feminine

Der Junge gab dem kleinen Mädchen eine rote Blume.
'The boy gave the small girl a red flower'

Die Jungen gaben den schönen Mädchen die roten Blumen.
'The boys gave to the pretty girls red flowers'

Hat er seiner Frau einen neuen Hut gekauft?
'Did he buy his wife a new hat?'

Haben sie eueren Frauen neue Hüte gekauft?
'Did they buy their wives new hats?'

Geben Sie der Lehrerin Geld?
'Do you give the teacher money?'

Geben Sie den Lehrerinnen Geld?
'Do you give the teachers money?'

Ich habe das Buch meiner Schwester nicht gegeben.
'I didn't give the book to my sister'

Ich habe das Buch meinen Schwestern nicht gegeben.
'I didn't give the book to my sisters'

Neuter

Meiner heimatlichen Stadt gebe ich einen Gruss.
'To my native city I give a greeting'

Den schönen Städten gebe ich einen Gruss.
'To the beautiful cities I give a greeting'

Der hellen Sonne sende ich einen Kuss.
'To the bright sun I send a kiss'

Den hellen Sonnen sende ich einen Kuss.
'To the bright suns I send a kiss'

Ich wollte dem armen Dorfe helfen.
'I wanted to help the poor village'

Ich wollte den armen Dörfern helfen.
'I wanted to help the poor villages'

Vertrauen Sie dem See?
'Do you trust the sea?'

Vertrauen Sie den Seen?
'Do you trust the seas?'

Accusative

Masculine

Sie sass den ganzen Tag in dem Zimmer.
'She sat in the room the whole day'

Sie sassen die ganzen Tage in dem Zimmer.
'They sat in the room the whole days'

Will dein Vater seinen alten Freund besuchen?
'Will your father visit his old friend?'

Mein Vater will seine alten Freunde nicht besuchen.
'My father won't visit his old friends'

Ich hoffe er schenkt Ihnen seine schöne goldene Uhr.
'I hope he gives you his beautiful gold watch'

Will er Ihnen seine schönen goldenen Uhren schenken?
'Will he give you his beautiful gold watches?'

Haben Sie dieses berühmte Bild gesehen?
'Have you seen this famous picture?'

Haben Sie diese berühmten Bilder gesehen?
'Have you seen these famous pictures?'

Feminine

Die junge Frau hat eine gelbe Blume.
'The young woman has a yellow flower'

Die jungen Frauen haben schöne Blumen.
'The young women have beautiful flowers'

Geben Sie mir ein schöneres Kleid.
'Give me a nicer dress'

Geben Sie mir schönere Kleider.
'Give me nicer dresses'

Ich möchte ein grösseres Zimmer haben.
'I would like to have a bigger room'

Wir haben auch kleinere und billigere Zimmer.
'We also have smaller and cheaper rooms'

Können Sie mir den kürzesten Weg zum Postamt zeigen?
'Could you show me the shortest way to the post office?'

Geben Sie mir schönere Blumen.
'Give me nicer flowers'

Neuter

Sie hat nicht genug Geld ein schönes Auto zu kaufen.
'She doesn't have enough money to buy a nice car'

Sie haben nicht genug Geld schöne Autos zu kaufen.
'They don't have enough money to buy nice cars'

Darf ich das Fenster öffnen?
'May I open the window?'

Dürfen wir die Fenster öffnen?
'May we open the windows?'

Geben Sie mir einen Apfel.
'Give me an apple'

Nehmen Sie die schönen Äpfel.
'Take these nice apples'

Der Kellner empfahl uns diesen Wein.
'The waiter recommended this wine to us'

Die Kellner empfahlen uns französische Weine.
'The waiters recommended to us French wines'

Vocative

Masculine

Es tut mir leid, mein lieber Freund.
'I'm sorry, my good friend'

Es tut mir leid, meine lieben Freunde.
'I'm sorry, my good friends'

Mein Sohn, was hast du getan!
'My son, what have you done!'

Meine Söhne, was habt ihr getan!
'My sons, what have you done!'

Peter, öffne das Fenster, bitte.
'Peter, open the window, please'

Burschen, was tut ihr?
'Boys, what are you doing?'

Mein guter Lehrer, hilf mir.
'My good teacher, help me'

Meine guten Lehrer, helft mir.
'My good teachers, help me'

Feminine

Mein Kind, was willst du?
'My child, what do you want?'

Meine Kinder, was war geschehen?
'My children, what has happened?'

Meine Tochter, wohin gehst du?
'My daughter, where are you going?'

Meine Töchter, was wollt ihr?
'My daughters, what do you want?'

Maria, wo bist du?
'Maria, where are you?'

Mädchen, wohin geht ihr?
'Girls, where are you going?'

Meine liebe Lehrerin, was wollen Sie?
'My dear teacher, what do you wish?'

Meine lieben Lehrerinnen, was wollt ihr?
'My dear teachers, what do you wish?'

Neuter

Ach, helle Sonne, ich grüße dich!
'Oh, bright sun, I greet you'

Ach, helle Sonnen, ich grüsse euch.
'Oh, bright suns, I greet you'

Meine heimatliche Stadt, ich liebe dich.
'My native city, I love you'

Meine heimatlichen Städte, ich liebe euch.
'My native cities, I love you'

Mein schönes Dorf, ich muss dich verlassen.
'My beautiful village, I must leave you'

Meine schönen Dörfer, ich muss euch verlassen.
'My beautiful villages, I must leave you'

Mein Herzchen, ich liebe dich.
'My darling, I love you'

Meine Herzchens, ich liebe euch.
'My darlings, I love you'

Instrumental

Masculine

Maria schrieb mit einem blauen Bleistift.
'Maria wrote with a blue pencil'

Maria schrieb mit blauen und roten Bleistiften.
'Maria wrote with blue and red pencils'

Es ist ein weisses Haus mit einem roten Dach.
'It's a white house with a red roof'

Es sind weisse Häuser mit roten Dächern.
'These are white houses with red roofs'

Der Sohn geht mit dem Vater, und die Tochter mit der Mutter.
'The son goes with the father and the daughter with the mother'

Die Söhne gehen mit den Vätern, und die Töchter mit den Müttern
'The sons go with the fathers and the daughters with the mothers'

Ich möchte mit dem nächsten Flugzeug fliegen.
'I would like to fly on the next plane'

Viele Leute fliegen mit Flugzeugen.
'Many people fly in planes'

Feminine

Das Mädchen schreibt mit der Kreide an die Tafel.
'The girl writes on the blackboard with chalk'

Die Mädchen schreiben mit den Kreiden an die Tafeln.
'The girls write on the blackboards with chalk'

Ich esse Suppe mit dem Löffel.
'I eat soup with the spoon'

Wir essen Suppe mit den Löffeln.
'We eat soup with spoons'

Der Sohn geht mit dem Vater, und die Tochter mit der Mutter.
'The son goes with the father and the daughter with the mother'

Die Töchter gehen mit den Müttern.
'The daughters go with the mothers'

Wir waschen die Kleider mit warmem Wasser.
'We wash our clothes with warm water'

Wir freuen uns mit den neuen Büchern.
'We enjoy ourselves with the new books'

Neuter

Er sagt viele Dinge mit einem Wort.
'He says many things with a word'

Er sagt viele Dinge mit wenigen Wörtern.
'He says many things with a few words'

Warum schreiben Sie mit der roten Feder?
'Why do you write with the red pen?'

Warum schreiben Sie mit den roten Federn?
'Why do you write with the red pens?'

Essen Sie gern Brot mit Butter?
'Do you like to eat bread and butter?'

Ich freue mich mit den schönen Stühlen.
'I am happy with the nice chairs'

Ich fahre mit einem neuen Auto.
'I drive with a new car'

Wir fahren mit neuen Autos.
'We drive with new cars'

Locative

Masculine

In unserem Garten ist ein kleiner Baum.
'In our garden there is a small tree'

In den grossen Gärten gibt es schöne Blumen.
'In the big gardens there are pretty flowers'

Das Geld ist in der Sparkasse.
'The money is in the bank'

Das Geld ist in den Sparkassen.
'The money is in banks'

Im Wörterbuche stehen Tausende von Wörtern.
'In the dictionary there are thousands of words'

In den Wörterbüchern stehen Tausende von Wörtern.
'In the dictionaries there are thousands of words'

In diesem Monat ist es wärmer.
'During this month it is warmer'

In den nächsten drei Monaten wird es kalt sein.
'During the next three months it will be cold'

Feminine

Kein Mensch ist auf der Strasse.
'There is no one in the street'

Da sind viele Leute auf den Strassen.
'There are many people in the streets'

In der Kirche war eine alte Frau.
'In the church there was an old lady'

In den Kirchen sind Männer und Frauen.
'In the churches there are men and women'

Der Lehrer schreibt an die Tafel.
'The teacher writes on the blackboard'

Die Lehrer schreiben an die Tafeln.
'The teachers write on the blackboards'

Das kleine Mädchen sass auf dem Sofa.
'The small girl sat on the sofa'

Die kleinen Mädchen sassen auf den Sofas.
'The small girls sat on the sofas'

Neuter

Lebten Sie in einer grossen Stadt?
'Did you live in a big city?'

Wir lebten in grossen Städten.
'We lived in big cities'

Das kranke Kind liegt im Bett.
'The sick child lies in bed'

Die kranken Kinder liegen in warmen Betten.
'The sick children lie in warm beds'

Der Hut ist nicht auf dem Stuhl.
'The hat isn't on the chair'

Die Hüte sind nicht auf den Stühlen.
'The hats are not on the chairs'

Fahren sie in einem Auto oder in einem Zug?
'Do they go in a car or in a train?'

Fahren sie in den Autos oder in den Zügen?
'Do they go in cars or in trains?'

Areas of Special Difficulty

Palatalization in the Vocative

Mein guter Mann, was wollen Sie?
'My good man, what do you want?'

Kozak, wo waren Sie?
'Kozak, where were you?'

Reisender, wohin gehst du?
'Traveler, where are you going?'

Der Fuchs sagte: "Krabbe, du kannst nicht schnell laufen."
'The fox said, "Oh, crab, you can't walk quickly"'

Mein Gott, was ist geschehen!
'My God, what has happened?'

Mein lieber Freund, wohin gehst du?
'My dear friend, where are you going?'

Grüne Wiese, du bist mein Heim.
'Green meadow, you are my home'

Feind, verlasse meine Heimat.
'Enemy, get out of my country'

Mein Pelz, ich werde dich nicht abgeben.
'My fur coat, I won't give you away'

Schäfer, wo sind deine Schafe?
'Shepherd, where are your sheep?'

Patriarch, segne uns.
'Patriarch, bless us'

Pole, zeige mir deine Stadt.
'Pole, show me your city'

Palatalization in the Locative

Haben Sie ein Buch in der Hand?
'Do you have a book in your hand?'

In diesem Jahre begann ein furchtbarer Krieg.
'In this year began a terrible war'

Geben Sie diese schönen roten Rosen Ihrer Tochter.
'Give these pretty red roses to your daughter'

Sie sah ein schönes Bild in dem Buch.
'She saw a nice picture in the book'

Da ist eine Fliege auf dem Bein.
'There is a fly on your leg'

Am Ufer des Meeres ist ein kleines Haus.
'On the seashore there is a small house'

Sahen Sie ein Kind auf dem Weg?
'Have you seen a child on the road?'

Da ist eine Katze auf dem Fussboden.
'There is a cat on the floor'

An welcher Etage leben Sie?
'On which floor do you live?'

Da ist ein Fleck auf dem Hut.
'There is a spot on his hat'

Da ist eine Fliege in dem Ohr.
'There is a fly in the ear'

Spielen nicht in dem Staub.
'Don't play in the dirt'

Vowel deletion

Dieser Junge ist sehr gross.
'This boy is very tall'

Die Hände des Jungen sind gross.
'The boy's hands are big'

Der Esel hat grosse Ohren.
'The donkey has big ears'

Die Esel haben grosse Ohren.
'The donkeys have big ears'

Der Tag ist länger als die Nacht.
'The day is longer than the night'

Die Tage sind länger als die Nächte.
'The days are longer than the nights'

Mein Hund und meine Katze sind sehr gescheit.
'My dog and my cat are very smart'

Ich habe einen Hund und eine Katze.
'I have a dog and a cat'

Vowel alterations i~o

Ist das der neue Tisch?
'Is this the new table?'

Auf dem weissen Tisch ist ein Bleistift.
'On the white table there is a pencil'

Ein Jahr ist eine lange Zeit.
'One year is a long time'

Ich fahre nach Deutschland am ersten Tage dieses Jahres.
'I'm going to Germany on the first day of this year'

Der Wagen hat vier Räder.
'The wagon has four wheels'

Die Wagen haben vier Räder.
'The wagons have four wheels'

Der Tag ist länger als die Nacht.
'The day is longer than the night'

Die Tage sind länger als die Nächte.
'The days are longer than the nights'

Vowel alternation i~e

Legen Sie das Papier hin!
'Put the paper down'

Hat er auf das gelbe Papier geschrieben?
'Did he write on the yellow paper?'

Dieser Bär ist sehr gross.
'This bear is very big'

Haben Sie den grossen Bär gesehen?
'Have you seen the big bear?'

Der Schwan ist ein schöner Vogel.
'The swan is a beautiful bird'

Hast du den weissen Schwan gesehen?
'Have you seen the white swan?'

Mein Ofen ist nicht neu.
'My stove isn't new'

Die Suppe ist am Ofen.
'The soup is on the stove'

Past tense

Masculine

Mein Bruder hat nie in New York gelebt.
'My brother has never lived in New York'

Hier starb mein lieber Vater.
'My dear father died here'

Mein Bruder verlor seine goldene Uhr.
'My brother lost his gold watch'

Hat er ihm das Buch gegeben?
'Did he give him the book?'

Feminine

Meine Schwester lebte in einer kleinen Stadt.
'My sister lived in a small town'

Meine Mutter freute sich nicht.
'My mother wasn't happy'

Die Frau schrieb den Brief ehe sie das Haus verliess.
'The lady wrote the letter before she left the house'

Hat sie den Lehrer nicht gesehen?
'Didn't she see her teacher?'

Neuter

Die Stadt war ganz vernichtet.
'The city was completely destroyed'

Der weisse Stuhl war gebrochen.
'The white chair was broken'

Der heisse Sommer endete.
'The hot summer ended'

Das Licht in dem Zimmer war ausgemacht.
'The light in the room was put out'

Plural

Was haben die Studenten jeden Tag getan?

'What did the students do each day?'

Warum haben sie ihn nicht heute morgen gefragt?

'Why didn't they ask him this morning?'

Meine Freunde wohnten in einem alten Haus.

'My friends lived in an old house'

Die Kinder haben einen Brief an dem Lehrer geschrieben.

'The children wrote a letter to the teacher'

GERMAN to ENGLISH - Translation

Plural allomorphs [z], [s], [Iz]

[z] Sind die Blumen rot oder weiss?
'Are the flowers red or white?'

Haben Sie Ihre Handschuhe?
'Do you have your gloves?'

Wohin gehen die Burschen?
'Where are the boys going?'

Ich habe zwei Hände und jede Hand hat fünf Finger.
'I have two hands and each hand has five fingers'

[s] Wieviele Hemden sind hier?
'How many shirts are here?'

Mein Mantel hat viele Taschen.
'My coat has many pockets'

Geben Sie mir zwei Fahrkarten nach Hamburg.
'Give me two tickets to Hamburg'

Viele Schiffe fahren von Amerika nach Europa.
'Many ships sail from America to Europe'

[Iz] An der Strasse sind zwei Bänke.
'Along the street there are two benches'

In den Kirchen sind Männer und Frauen.
'In the churches there are men and women'

Dieses Buch hat viele Seiten.
'This book has many pages'

Was kosten diese zwei Uhren?
'What do these two watches cost?'

Possessive allomorphs [z], [s], [Iz]

[z] Wo ist der Kaffee des Mannes?
'Where is the man's coffee?'

Sind die Hände des Burschen gross?
'Are the boy's hands big?'

Wo ist Herrn Karls Hut?
'Where is Mr. Karl's hat?'

Der Sohn hat das Vermögen seines Vaters geteilt.
'The son divided his father's property'

[s] Die Freundin meiner Tante ist krank.
'My aunt's friend is sick'

Wo sind Herrn Specks Bücher?
'Where are Mr. Speck's books?'

Ist das Frau Langits Handtasche?
'Is this Mrs. Langit's handkerchief?'

Die Farbe meiner Katze ist weiss.
'My cat's color is white'

[Iz] Ist Fräulein Marta die Schöülerin des Herrn Berlitz?
'Is Miss Martha Mr. Berlitz's student?'

Ist das Fräulein Rosas Kleid?
'Is it Miss Rosa's dress?'

Ist das der Besen der Hexe?
'Is this the witch's broom?'

Wissen Sie die Leidengeschichte Jesus?
'Do you know Jesus's passion story?'

Past tense allomorphs [d], [t], [Id]

[d] Die Knaben lobten die Mädchen.
'The boys praised the girls'

Der Sohn blieb mit seiner alten Mutter.
'The son stayed with his elderly mother'

Er wohnte in jenem Haus.
'He lived in that house'

Sein Vater hat ein Geschenk erhalten.
'His father received a gift'

[t] Die Mutter wusch ihr Kind.
'The mother washed her child'

Ich fragte ihn zweimal, aber er hat keine Antwort gegeben.

'I asked him twice, but he didn't give me an answer'

Er dankte dem Lehrer für die gute Auskunft.

'He thanked the teacher for the good news'

Sie hoffte ihren Sohn wieder zu sehen.

'She hoped to see her son again'

[Id] Er hob seine Hände hoch.

'He lifted his hands high'

Ich besuchte ihn, als er krank war.

'I visited him when he was sick'

Die Leute fingen an zu arbeiten.

'The people started to work'

Sie rief lauter, da er es nicht gehört hatte.

'She shouted louder because he didn't hear her'

Past Participle Allomorphs [d], [t], [Id]

[d] Der Südpol wurde vor vielen Jahren entdeckt.

'The South Pole was discovered many years ago.'

Das kleine Kind ist ertrunken.

'The small child has drowned.'

Der Mann kann vielleicht gerettet werden.

'Perhaps the man can be saved.'

Der Mann wurde gelobt, weil er etwas gutes getan hatte.

'The man was praised because he had done something good'

[t] Sind die Waren schon eingepackt?

'Are the goods wrapped up already?'

Der Chauffeur wurde bei einem Polizist angehalten.

'The chauffeur was stopped by the policeman.'

Das Buch wurde vor einem Jahre herausgegeben.

'The book was published a year ago.'

Der König wurde von einem Attentäter angefallen.

'The king was attacked by the assassin.'

[Id] Der Verwundete muss einige Tage im Bett bleiben.
'The wounded man has to stay in bed for a few days.'

Glauben Sie nicht, dass das ein wenig "übertrieben
ist?

'Don't you think that it is a bit exaggerated?'

Ich bin oft zu meiner Tante eingeladen.

'I am often invited to my aunt.'

Jetzt sind wir gegen den Regen geschützt.

'We are now protected against the rain.'

UKRAINIAN - Grammatical Permutations

Singular

Plural

Masculine = Forward Formation

odyn staryj čolovik
'an old man'

čotyry _____
'four'

odyn molodyj učytel'
'a young teacher'

dva _____
'two'

odyn harnyj obraz
'a nice picture'

try _____
'three'

odyn velykyj mjač
'a big ball'

dva _____
'two'

Masculine = Back Formation

odyn _____
'one'

dva novi zošyty
'two new notebooks'

odyn _____
'one'

try dobri storoži
'three good guards'

odyn _____
'one'

dva červoni olivci
'two red pencils'

odyn _____
'one'

čotyry stari čoloviky
'four old men'

Feminine = Forward Formation

odna bila stelja
'a white ceiling'

try _____
'three'

odna znamenyta škola
'an excellent school'

dvi _____
'two'

odna cikava knyžka
'an interesting book'

čotyry _____
'four'

odna mudra holova
'a wise head'

dvi _____
'two'

Feminine = Back Formation

odna _____
'one'

odna _____
'one'

odna _____
'one'

odna _____
'one'

dvi harni sestry
'two pretty sisters'

try molodi žinky
'three young women'

dvi novi stiny
'two new walls'

čotyry siri sorocky
'four gray shirts'

Neuter = Forward Formation

odno velyke mesto
'a big city'

odno nove pero
'a new pen'

odno misce
'one seat'

odno važlyve zavdannja
'an important task'

dva _____
'two'

try _____
'three'

čotyry _____
'four'

dva _____

Neuter = Back Formation

odno _____
'one'

odno _____
'one'

odno _____
'one'

odno _____
'one'

try sela
'three villages'

dva novi vikna
'two new windows'

čotyry mali ližka
'four small beds'

dva polomani krisla
'two broken chairs'

Areas of Special Difficulty

Vowel alternation [i~o]

odyn žovtyj stil
'one yellow table'

dva _____
'two'

odyn hostryj niž
'one sharp knife'

odyn velykyj klopit
'a big problem'

odna čorna nič
'a dark night'

odyn _____
'one'

odyn _____
'one'

odyn _____
'one'

odyn _____
'one'

Vowel alternation [i~e]

odyn bilyj papir
'white paper'

odyn nyzkyj berih
'a low riverbank'

odyn staryj vedmid'
'an old bear'

odyn bilyj lebid'
'a white swan'

odyn _____
'one'

odna _____
'one'

odyn _____
'one'

odyn _____
'one'

try _____
'three'

dva _____
'two'

dvi _____
'two'

čotyry dobri tabory
'four good camps'

dva horbati nosy
'two crooked noses'

try molodi koni
'three young horses'

dva dovhi stoly
'two long tables'

try _____
'three'

try _____
'three'

čotyry _____
'four'

dva _____
'two'

try velyki peči
'three big ovens'

dvi harni reči
'two nice things'

dva koreni
'two roots'

try harni hrebeni
'three nice combs'

Vowel deletion

odyn čornyj pes
'a black dog'

odyn sonjašnyj den'
'a sunny day'

odyn palec'
'a finger'

odyn novyj učen'
'a new student'

odyn _____
'one'

odyn _____
'one'

odyn _____
'one'

odyn _____
'one'

čotyry _____
'four'

dva _____
'two'

čotyry _____
'four'

dva _____
'two'

try molodi ukrainci
'three young Ukrainians'

syl'ni vitry
'strong winds'

dva mali pni
'two small stumps'

dva harni xlopci
'two nice boys'

CASES

Nominative

Genitive

Singular

Masculine

novyj slovnyk
'a new dictionary'

Ja ne maju _____
'I don't have'

dorohyj hodynnyk
'an expensive watch'

velykyj obraz
'a big picture'

malyj ptax
'a small bird'

Feminine

nova kimnata
'a new room'

Vin ne maje _____
'He doesn't have'

zdorova žinka
'a healthy wife'

čista tarilka
'a clean plate'

velyka ložka
'a big spoon'

Neuter

nove avto
'a new car'

Vona ne maje _____
'She doesn't have'

zelene šatro
'a green tent'

harne lyce
'a nice face'

male ozero
'a small lake'

Areas of Special Difficulty

Vowel alternation [i~o]

velykyj kin'
'a big horse'

Vona ne maje _____
'She doesn't have'

čornij kit
'a black cat'

sylnyj viz
'a sturdy wagon'

velykyj klopit
'a big problem'

Vowel alternation [i~e]

harna pič
'a nice oven'

Ja ne baču _____
'I don't see'

harna rič
'a nice thing'

tjažkyj kamin'
'a heavy stone'

velyke selo
'a big village'

Vowel deletion

malyj pes
'a small dog'

Ja ne maju _____
'I don't have'

velykyj osel
'a big donkey'

červonyj olivec'
'a red pencil'

bilyj stilec'
'a white stool'

Plural

Masculine

novi slovnyky
'new dictionaries'

Ja ne maju _____
'I don't have'

dorohi hodynnyky
'new watches'

velyki obrazy
'big pictures'

mali ptaxy
'small birds'

Feminine

novi kimnaty
'new rooms'

Vony ne majut' _____
'They don't have'

zdorovi žinky
'healthy wives'

čysti tarilky
'clean plates'

velyki ložky
'big spoons'

Neuter

novi avta
'new cars'

My ne majemo _____
'We don't have'

zeleni šatra
'green tents'

harni lycja
'nice faces'

mali ozera
'small lakes'

Nominative

Dative

Singular

Masculine

mij malyj syn
'my small son'

Daju olivec' _____
'I give a pencil'

mij kolyšnij včytel'
'my former teacher'

toj velykyj čolovik
'that tall man'

tvij starsyj brat
'your older brother'

Feminine

tvoja starsa sestra
'your older sister'

Vin daje knyžku _____
'He is giving a book'

harna divčyna
'a nice girl'

pyl'na učenycja
'a diligent student'

cikava žinka
'an interesting woman'

Neuter

jasne sonce
'bright sun'

Daju pryvit _____
'I send greetings'

moje ridne selo
'my native village'

teple lito
'a warm summer'

moje ridne misto
'my native city'

Plural

moji mali syny
'my small sons'

Vin daje hroši _____
'He gives money'

moji kolyšni včyteli
'my former teachers'

ti velyki čoloviky
'those tall men'

tvoji starši braty
'your older brothers'

Feminine

tvoji starši sestry
'your older sisters'

Vona daje knyžky _____
'She gives books'

harni divčata
'pretty girls'

pyl'ni učenyci
'diligent students'

cikavi žinky
'interesting women'

Neuter

jasni soncja
'bright stars'

Daju pryvit _____
'I send greetings'

moji ridni sela
'my native villages'

tepli lita
'warm summers'

moji ridni mista
'my native cities'

Nominative

Accusative

Singular

Masculine

tvij čolovik
'your husband'

Ja baču _____
'I see'

staryj mišok
'an old sack'

novyj hodynnyk
'a new watch'

zolotyj xrest
'a golden cross'

Feminine

moja molodša sestra
'my younger sister'

Čy ty bačyŭ _____
'Did you see'

čysta soročka
'a clean shirt'

moja nova knyžka
'my new book'

bila stelja
'a white ceiling'

Neuter

harne mesto
'a nice city'

My bač^ŷymo _____
'We see'

velyke more
'a big sea'

malen'ke hnizdo
'a tiny nest'

zlomane krylo
'a broken wing'

Plural

Masculine

velyki čoloviky
'big men'

Ja bač^ŷu _____
'I see'

stari mišky
'old sacks'

novi hodynnyky
'new watches'

zoloti xresty
'gold crosses'

Feminine

moji molodši sestry
'my younger sisters'

Čy ty bač^ŷyv _____
'Have you seen'

čysti soročky
'clean shirts'

novi knyžky
'new books'

bili steli
'white ceilings'

Neuter

harni mesta
'nice cities'

My bač^ŷily _____
'We have seen'

velyki morja
'big seas'

malen'ki hnizda
'small nests'

zlomani kryla
'broken wings'

Nominative

Vocative

Singular

Masculine

Andrij
'Andrew'

_____, xody sjudy
'come here'

Petro
'Peter'

dorohyj syn
'dear son'

mij včytel'
'my teacher'

Feminine

Iryna

_____, xody sjudy
'come here'

Tanja

Maria

moja donja
'my daughter'

Neuter

jasne sonce
'bright sun'

_____, de ty?
'where are you'

moje ridne misto
'my native city'

moje ridne selo
'my native village'

šyroke more
'a big sea'

Areas of Special Difficulty

Palatalization [k~č]

molodyj kozak _____, jakyj ty harnyj
'young Kozak' 'how handsome you are'

rak-neborak /used in fairy tales/
'poor crab'

molodyj čumak
'young traveler'

ljubyj junak
'dear boy'

Palatalization [h~ž]

dorohyj druh _____, ščo z toboju
'dear friend' 'what happened to you'

vsemohučyj Boh
'almighty God'

ljutyj vrah
'vicious enemy'

zelenyj luh
'a green meadow'

Palatalization [x~š]

dux _____, pomožy meni
'spirit' 'help me'

patriarch
'patriarch'

ljax
'Pole'

pastux
'shepherd'

Plural

Masculine

moji syny _____, pomožit' meni
'my sons' 'help me'

dorohi včyteli
'dear teachers'

harni xlopci
'handsome boys'

vidvažni kozaky
'brave Kozaks'

Feminine

moji doni _____, pomožit' nam
'my daughters' 'help us'

dorohi včytel'ky
'dear teachers'

harni divčata
'pretty girls'

dorohi pryjatel'ky
'dear friends'

Neuter

jasni soncja _____, de vy
'bright stars' 'Where are you'

ridni sela
'native villages'

ridni mista
'native cities'

šyroki morja
'wide seas'

Nominative

Instrumental

Singular

Masculine

mij brat
'my brother'

Čy ty bavyššja _____
'Are you playing with'

staryj mjač
'an old ball'

červonyj olivec'
'a red pencil'

bahatyj korol'
'a rich king'

Feminine

pohana divčyna
'an ugly girl'

Vin ne tišyt'sja _____
'He is not happy with'

dobra učenycja
'a good student'

dovha holka
'a long needle'

mala sestryčka
'my small sister'

Neuter

čorne pero
'a black pen'

Tišusja _____
'I'm happy with'

šyroke pole
'a wide field'

velyki vikna
'big windows'

ce stare ližko
'this old bed'

Areas of Special Difficulty

Vowel alternations [i ~ o]

hostryj niž
'a sharp knife'

Čy ty bavyšsja _____
'Are you playing with'

bilyj kit
'a white cat'

syl'nyj kin'
'a strong horse'

dovhyj nis
'a long nose'

Vowel alternation [i ~ e]

papir
'paper'

Bavljusja _____
'I'm playing with'

lid 'ice'

harna pič
'a nice oven'

bilyj lebid'
'a white swan'

Vowel deletion

velykyj pes
'a big dog'

Vin ne bavytsja z _____
'He is not playing with'

harnyj xlopec'
'a nice boy'

hrubyj šnurok
'a thick rope'

čudovyj zamok
'a beautiful castle'

Plural

Masculine

moji braty
'my brothers'

Ja ne tišusja _____
'I am not happy with'

stari mjači
'old balls'

červoni olivci
'red pencils'

bahati koroli
'rich kings'

Feminine

pohani divčata
'ugly girls'

Vin bavyt'sja _____
'He is playing with'

dobri učenyci
'good students'

dovhi holky
'long needles'

mali sestryčky
'small sisters'

Neuter

čorni pera
'black pens'

Vona tišyt'sja _____
'She is happy with'

syroki polja
'wide fields'

velyki vikna
'big windows'

ci stari ližka
'these old beds'

Nominative

Locative

Singular

Masculine

velykyj stilec'
'a big stool'

Vin sydyt' na _____
'He is sitting on'

harnyj hotel'
'a nice hotel'

červonyj fotel'
'a red armchair'

šyrokyj val
'a wide wall'

Feminine

velyka kramnycja
'a big store'

Vona sydyt' u _____
'She is sitting in'

nova xata 'a new house'

zelena trava 'green grass'

velyka tjurma 'a big jail'

Neuter

harne vikno
'a nice window'

Vin ne sydyt' na _____
'He isn't sitting on'

velyke ližko
'a big bed'

male šatro
'a small tent'

nove misce
'a new place'

Areas of Special Difficulty

Palatalization [k c]

prava ruka
'the right hand'

Ce je u _____
'It is in'

šyroka rika
'a wide river'

live oko
'the left eye'

sribna ložka
'a silver spoon'

Palatalization [h ~ z]

liva noha
'left foot'

Ce je na _____
'it's on'

slyz'ka doroha
'a slippery road'

vysokyj berih
'a high riverbank'

novyj porih
'a new threshold'

Palatalization [x ~ s]

live vuxo
'left eye'

Ce je u _____
'It's in'

novyj kapeljux
'a new hat'

zelenyj horox
'green peas'

teplyj kožux
'a warm coat'

Plural

Masculine

velyki stil'ci
'big stools'

Vony je na _____
'They are on'

harni hoteli
'nice hotels'

červoni foteli
'red armchairs'

šyroki valy
'wide walls'

Feminine

velyki kramnyci
'big stores'

Vony je u _____
'They are in'

novi xaty
'new houses'

harni pidlohy
'nice floors'

velyki tjurmy
'big prisons'

Neuter

harni vikna
'nice windows'

Vony je na _____
'They are on'

velyki ližka
'big beds'

mali šatra
'small tents'

novi miscja
'new places'

Past tense

Present

Past

Masculine

Ivan pyše zadaču
'John is writing'

Mij syn ne jide do mista
'My son isn't going to the city'

Čomu vin ne čytaje knyžku?
'Why doesn't he read a book?'

Čy tvij pes je xvoryj?
'Is your dog sick?'

Feminine

Vona čytaje knyžku
'She's reading a book'

Moja sestra xodyt' do školy
'My sister goes to school'

De tvoja don'ka včyt'sja?
'Where does your daughter study?'

Čomu cja divčyna ne tancjuje?
'Why doesn't this girl dance?'

Neuter

Vikno je brudne
'The window is dirty'

Sonce zaxodyt' za horu
'The sun is setting behind a mountain'

Svitlo svitytsja v kuxni
'The light is on in the kitchen'

Vikno v spal'ni je zbyte'
'The window in the bedroom is broken'

Plural

Učni pyšut' zadaču
'The students are writing'

Dity bavljat'sja nadvori
'The children are playing outside'

Divčata spivajut' harnu pisnju
'The girls are singing a nice song'

Xlopci jim pomahajut'
'The boys are helping them'

ENGLISH - Grammatical Permutations

Singular

Plural

[z]	a brown chair	some _____
	a small room	five
	a graceful swan	several
	a nice girl	many
[s]	a big cat	two _____
	a beautiful present	several
	an interesting book	many
	a red top	two
[Iz]	a clean dish	six _____
	a white blouse	two
	a long dress	many
	an ugly witch	three
[z]	a _____	several silver spoons
	a	two mighty kings
	a	some small dogs
	a	prestigious schools
[s]	a _____	several pots
	a	many blue coats
	a	two skillful cooks
	a	many birthday cakes
[Iz]	a _____	difficult languages
	a	many big branches
	a	many beautiful churches

a

two ugly witches

Possessive

[z]	John	Is this_____house?
	uncle	This isn't my_____car.
	teacher	Is it your_____pen?
	brother	Is it his_____watch?
[s]	Dick	This is_____cat.
	aunt	Is this your_____coat?
	Robert	She isn't_____girlfriend
	cook	What is the_____salary?
[Iz]	Rosa	I don't have_____address.
	witch	Is it the_____broom?
	Klara	This is_____mother.
	Roberta	This isn't_____spoon.

Present tense

Past tense

[d]	Every year we travel extensively.	Yesterday_____
	The children play outside.	
	We always open the window.	
	The baby cries a lot.	
[t]	My father works very hard.	Yesterday_____
	The mother kisses her child.	
	I always stop working at noon.	
	The students push each other.	
[Id]	My sister wants to play.	Yesterday_____
	We always paint the room yellow.	

My children need a lot of attention.

We visit our parents every week.

Active

Passive

[d] Waitresses serve customers.

Customers_____

We will call off the game.

The game will

People play soccer in Europe.

Soccer

I will deliver the letter.

The letter

[t] He will publish a book next year.

His book_____

The secretary typed the letter.

The letter

Someone will announce the results.

The results

People produce coffee in Brazil.

Coffee

[Id] The doctor treats the patient.

The patient_____

Bob invites Mary to the party.

Mary

John suggested a new idea.

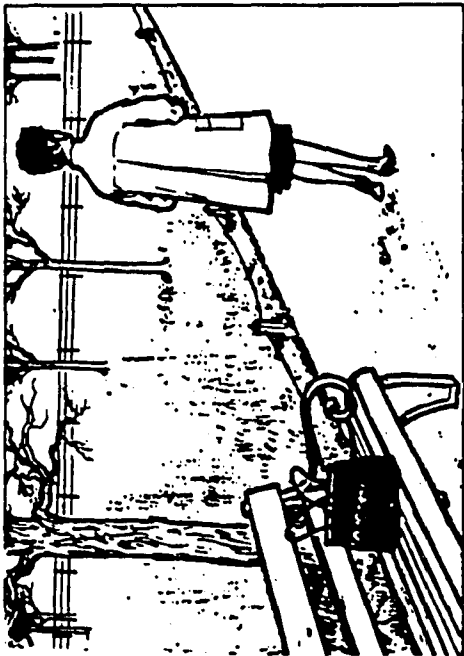
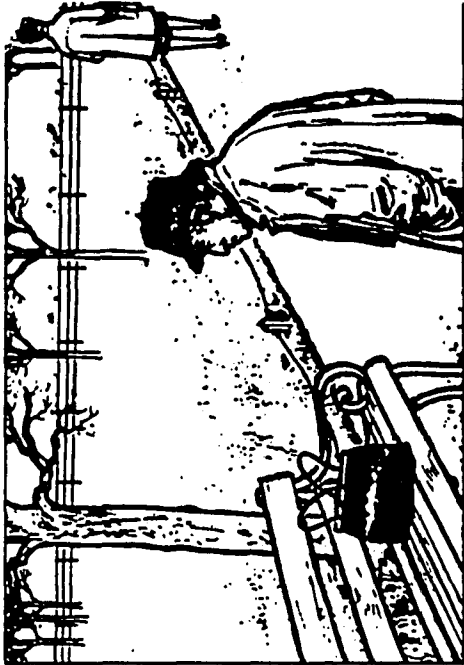
A new idea

The workers will complete the new highway
next month.

The new highway

ILLUSTRATION; PICTURE STORY TASK

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