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Acquisition of impersonal constructions in L2 Russian.

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Introduction.

In this study I want to investigate and analyze the process of acquisition of L2 Russian on the example of the acquisition of impersonal sentences:

(1) Mamu pozdravlayut.
Mother (ACC) congratulate (3pl).
'Mother is congratulated.'

(2) Mama pozdravlyayet papu.
Mother(NOM) congratulate(3d sg, PRESENT) father(ACC).
'Mother congratulates father.'

The choice of this type of sentences is defined by its complexity and its closeness in pragmatic sense to passive constructions. The object is propagated to the subject position but it still keeps accusative case marking and it is followed by a verb in plural form which pronoun is dropped. Logical stress in the sentences falls on the verb which means that verb conveys new information, it is the focus of the sentence; and the 1st NP carries old information. Acquisition of such constructions and ability to produce target-like sentences requires a lot of grammatical and pragmatic development of L2 of the learner. The learner should be able to distinguish between case marking and its role in syntactic marking of the sentence elements, to understand pragmatic choice of word order in Russian and to realize the process of mapping the arguments to their function in the sentence.

For my research I have chosen to work within the framework of (Extended) Processability Theory (PT) developed by M. Pienemann (1998). According to PT any language develops gradually and the process can be divided into levels which reflects actually the development of inner language

processor. PT states that any utterance of the language requires a set of processing procedures. These procedures define the complexity of the utterance and reflect the level of the learners' interlanguage development. Processing procedures are language-specific and they form a hierarchy. A hierarchy of processing procedures is based on LFG grammar. LFG, as a grammatical formalism, provides a clear view on the internal structure of any utterance. According to LFG in any language construction we can observe three levels or three parallel structures: constituent structure, functional structure and argument structure. Constituent structure is mapped to functional structure via the process of feature unification. And argument structure is mapped onto functional structure which means that semantic roles are mapped onto their grammatical functions. All three levels and the mappings from level to level are very important for the explanation of SLA :they define the level of the interlanguage development.

In order to process language at high speed, the speaker is required to store grammatical information about parts of the sentence s/he produces in short term memory. Depending on the availability of particular processing procedures, the learner can unify this grammatical information at different levels of constituents. This process of unification is necessary because the output in language production is linear but mental processes of language production are not. (Pienemann, 1998:54) The hierarchy of processing procedures is implicational: ever lower level in the hierarchy is the prerequisite for the higher one. Extended PT offers an approach that allows to explain a wider range of linguistic phenomena: passives, causative and topicalisation. The Extended PT has adopted the Lexical Mapping theory in order to be able to explain the mapping of arguments onto functional structure. Each argument role can be expressed in different grammatical forms. At lower levels of L2 development the learners tend to stick to linear mapping of arguments onto functional structure because it costs less in means of processing procedures. Once the level of

the learner's L2 development increases the linear mapping can be substituted by non-linear mappings which allow the learner to produce passives and other complex constructions.

This research aims to answer the following set of questions:

1. How does the PT hierarchy of Russian L2 look like?How many levels does it have and which procedures correspond to which level?
2. At what level of language IL development the learners of L2 Russian will be able to produce and to comprehend IMP constructions? What are the prerequisites for comprehension and production of these constructions?

Methodology.

For building a hierarchy of Russian L2 processing procedures I use LFG formalism. Starting from single lemmas and words and going to phrases and then sentences I build the repository of grammar rules and lexical features which reflect the work of inner processor. Then to each level of language development I assign a set f procedures which are to be acquired.

The hierarchy is tested on the L2 Russian spoken data. The data is collected during the interviews with the participants of the research. All the interviews are recorder and evaluated.

Participants are offered a set of tests: profiling test and tests on the comprehension and production of impersonal constructions.

As a result I expect to get for every participants his/her level of interlanguage development and results for comprehension and production tests. These data will allow me to find the correspondence between the level of language development and ability to comprehend and produce impersonal constructions, and to analyze the process of Russian L2 acquisition. This research contributes to the studies of cross-linguistic aspects of PT and its plausibility for typologically different languages. PT only once has been applied for the study of development of Serbian nominal structures by the speakers of Serbian in Australia (Medojevic, 2009). So this will be the first attempt to account for a wide range of syntactic-

pragmatic procedures in L2 Russian as Slavic language. The study of the acquisition of impersonal constructions contributes to the understanding of L2 Russian syntax and its acquisition by the learners. It also allows to understand the underlying principles of language processing by L2 learners and to create an effective methods of teaching Russian as a foreign language.

CHAPTER 1: SLA research development. Brief overview of approaches and paradigms.

Second language acquisition has been developing and expanding in the last 50-70 years and since the end of twentieth-century the body of knowledge of this field has seen increased sophistication. SLA has been influenced by research in different disciplines : linguistics, sociolinguistics and psychology. With regard to the influence each of these fields has on SLA, the difference can be found in the general emphasies: linguistics focuses on the description of the linguistic systems of L2 learneres, psychology focuses on the process by which those systems are created, and sociolinguistics focuses on social factors that influence the acquisition of the linguistic system and the use of that system.

To be able to speak in details about the direction that SLA research has taken, it is neccessary to refer to two important positions in the twentieth-century linguistic theory: 'mentalism' and 'empiricism'.

Mentalism, a psychological and philosophical concept developed by Chomsky , attempts to "describe the internal (innate) language mechanism that provides the basis for the creative aspect of language development and use". (Bussmann et al., 1998) Chomsky defined his mentalist concept in two ways: first, by assuming that every language grammar has deep structure; and second, by arguing that language is acquired by a special inborn (universal) machanism that provides a basis for language development. From mentalist point of view the language can not be explained and acquired just by looking at the raw data because such observable data was considered inadequate and incomplete as evidence – that was called the "poverty of stimulus argument". The main argument of Chomsky was that learners at some level of their language development produce sentences that they have never heard or learned before. This perfomance that exceeds the input that the learners were exposed to serves as the evidence of the existence of a special Language acquisition device (LAD), which is thought

to contain all and only the principles of languages that all languages have in common. This set of principles forms a so-called 'Universal Grammar'. Chomsky did not make any claims about the applications of his theory to SLA but many researches believe that it is a good framework for understanding second language acquisition (White, 1989). Vivian Cook (1991) points out that though many language learners fail to achieve complete mastery of the target language, the problem of insufficient input holds . That means that the process of first language acquisition does not differ from second one and knowledge of UG is available for both type of learners. Others, on the contrary, argue that although UG may be present and available for second language learners its nature has been altered by the acquisition of other languages.

One of the models of SLA which was inspired by the arguments around difference in FLA and SLA and by the theory of Chomsky is Krashen's 'Monitor Model'. (Krashen,1978) Krashen merged together components from various fields – FLA, developmental studies and neuro-psychology. He based his model on five hypotheses. First hypotheses contrasted acquisition and learnig processes. Krashen draw a distinction between both processes: we 'acquire' something unconsciously when we are exposed to language material and we 'learn' through a conscious attention to forms and rules of the language. The second, Monitor hypothesis, was stating that learners can not use "acquired" knowledge consciously when they speak naturally. The "acquired" knowledge form a monitoring system that helps the learner to plan, edit and produce sentences of the language but only when the learner has time to think and concentrate on the process of speaking, knows the rules and focuses on form and correctness of the utterances.

The third hypothesis, Natural Order hypothesis, states that acquisition of grammatical structures in SLA follows a predictable 'natural order' and does not depend on the input the learner gets or the first language background. Forth hypothesis says that the learner

improvess and progresses along the 'natural order' when the input that the learner gets is one leverl higher than the learner's current level of language development. And the last hypothesis assumed that there are 'affective variables' that influence the pace of language acquisition, such as motivation, self-confidence and low anxiety.

Krashen's model gave a strong impetus to fundamental issues in current SLA research: the nature of natural order, the role of input, implicit versus explicit learning, the role of psychological factors in language learning.

As an opponent to mentalism in language theory there was a parallel development of empiricism that in general could be defined as an approach to language acquisition or language learning through the evidence gathered by experience in that language. Bloomfield (1983) in his " An Introduction to the Study of Language" systematised analytical techniques for language description and understanding and he was underlying the importance of the analyses on the real 'raw' data. Therefore empiricism concentrates mostly scientific approach to language-specific which in the study of language leads precisely to the procedure of using actual instances of speech as the starting point for analysis. Parallel to linguistic empiricism there were developments in the field of psychology, or to be exact, learning theory. B.F. Skinner (1965) in his book "Verbal behaviour" described the learning process in general and learning the language in particular as the product of teaching: conditionning and habit formation.

Skinner suggested that a child imitates the language of its parents or carers.Successful attempts are rewarded because an adult who recognises a word spoken by a child will praise the child and/or give it what it is asking for.Successful utterances are therefore reinforced while unsuccessful ones are forgotten. In 1960s behaviorism was a popular theory that influenced teaching methods of L2. Nelson Brooks (1964) and Robert Lado (1964) developed special audiovisual teaching materials that were aimed at creating proper language habits

through mimicry and memorization of the patterns of the language. Application of behaviorism theory to second language acquisition gave raise to Constrastive Analyses hypothesis (CAH) because it was assumed that a person learning a second language would start off with the habits formed in the L1 and that these habits would interfere with the new ones needed for the L2. The analyses of typologically different languages and attempts to predict the possible errors in the learners interlanguage were seen as the main source for creating a successful teaching techniques and understanding the acquisition process. However, this claim could not be sustained by empirical evidence that was accumulated in the mid- and late 1970s. It was soon pointed out that many errors predicted by Contrastive Analysis were not observed in learners' language. Even more confusingly, some errors were made by learners irrespective of their L1. It thus became clear that Contrastive Analysis could not predict learning difficulties, and was only useful in the retrospective explanation of errors. These developments, along with the decline of the behaviourist and structuralist paradigms considerably weakened the appeal of Contrastive Analysis.

Human ability to acquire language drew attention of computer scientists and cognitive specialists and this lead to the development of a new approach to language acquisition in general and SLA in particular. Computers were used to explain human intellectual ability to acquire language. Elman(1996) proposed a computer model of language acquisition that behaves and learns without rules being explicitly wired into it. For the learning process the neural networks were used. The idea was to draw some connections between the given language material . The system was learning and acquiring the nature of the lexical forms and their grammatical functions and its performance mainly depended on the frequency of particular language phenomenon presented in the data it used for learning. Such approach to language acquisition was called "Connectionism". Cognitive scientist adopted this approach to language learning and the explanation of the work of human brain; they

emphasized the importance of frequency with which learners encounter specific linguistic features in the input and the frequency with which the features occur together.

Connectionists argue that learners gradually build up their knowledge of language through exposure to the thousands of instances of the linguistic features they eventually hear. After hearing language features in specific situations or linguistic context over and over again, learners develop a stronger network of "connections" between these elements. Ellis (2003,2005) and others suggested as well that language is learned partly, in chunks larger than single words. This approach still faces the same problem of " poverty of stimulus" or logical problem of language acquisition. Nevertheless, connections inspired the development of cognitive theories in SLA which were trying to explain language development by studying the information processing in human brain.

Cognitive psychologists working in an information processing model of human learning and performance see SLA as the building up of knowledge that can eventually be called on automatically for speaking and understanding. This type of approach was called "Information Processing". Segalowitz (2003) argued for a gradual development of language, he explained that learners at the earliest levels will use most of their resources to understand the main words in a message. In such situations, as he supposes, learners may not be able to notice grammatical morphemes attached to some of the words, especially those that do not substantially affect the meaning, so gradually, through practice and experience, information that was new becomes easier to process and learners become able to access it quickly and even automatically. These ideas could be found in the works of Anderson (Anderson et al., 1996), DeKeyser (1998) who developed the notions of "Declarative knowledge" and "Procedural knowledge" and hypothesized that through practice declarative knowledge become procedural.

Blaxton (1989) added a new depth to the theory of language processing and retrieval, he

argued that the information is best retrieved in situations that are similar to those in which it was learned. His hypothesis offered a plausible way of explaining a widely observed phenomenon in L2 language learning: knowledge that is required mainly in rule learning or drill activities may be easier to access on test that resemble the learning activity than in communicative situations.

Pienemann (1998) developed a new theory that seems to sum up the experience of different applications of linguistic and psychological theories of language learning. He proposed a Processability theory (PT) which focuses on language processing mechanisms that shape the course of language development. Pienemann argues that language acquisition incorporates as one essential component the gradual acquisition of computational routines or procedures for processing particular grammatical information: the task of acquiring a language includes the acquisition of the procedural skills needed for the processing of the language.

As the theories of SLA were expanding and developing more and more concepts and specific language learning problems were taken into account. For example, Richard Schmidt (1990) proposed the "Noticing Hypothesis", suggesting that nothing is learned unless it has been noticed. Noticing does not itself result in acquisition but it is the essential starting point. From information processing perspective, anything that uses up our "mental-processing space" , whether we are aware of it or not, can contribute to learning.

Sociocultural perspective of language learning is trying to account for the language development through the social interaction. Vygotsky's theory (1978) assume that cognitive development including language development arises as a result of social interactions. Primary among these interactions are those between individuals.

Over the years the researchers tried to find the best theory or explanatory model for SLA acquisition. Some were trying to explain the language acquisition by the inner abilities of human brain and by the existence of special innate device that allows to acquire language and

its rules. Other looked at the process of language acquisition as the habit formation that is influenced by a number of external factors such as available input, learning environment,motivation, etc. The learnability problem was seen as the main focus of research in language acquisition. But recently the developmental problem was added to the questions that are to be answered by SLA researcher. Currently one of the most successful theories that account for developmental routes that language acquisition follows is the Processability theory. In the next chapter I will discuss the principles of this theory in detail and will also apply it to the study of Russian as L2.

CHAPTER 2: Processability theory and its application to Russian as L2.

2.1 Theoretical framework : PT and its extensions.

Processability Theory (PT) (Pienemann, 1998; Pienemann et al 2005) is a universal theory of second language acquisition based on theory of speech processing, lexical access and memory capacity. The theory predict universal second language (L2) developmental sequences and can be applied to typologically different languages. This is possible by utilizing the notions of "feature unification: and "lexical mapping mechanism" within the framework of Lexical Functional Grammar(Bresnan, 2001). A number of researchers have applied PT to the acquisition of various L2s with LFG formalism, such as English and German (Pienemann, 1998), Italian (Di Biase and Kawaguchi, 2002), Swedish (Pienemann and Hakansson, 1999),Japanese (Di Biase and Kawaguchi, 2002; Kawaguchi, 2005) etc. Processability theory explains L2 morphosyntactic development in terms of the architecture of the human language processor and other human psychological constraints such as how lexical access occurs and how working memory constraints L2 production. According to Pienemann (1998,2005), the logic underlying PT is that the learner at any level is able to produce and comprehend only those L2 linguistic structures that current level of language processor can handle. Therefore, it is important to understand the architecture of the language processor and how it handles an L2 in order to predict the developmental sequences of linguistic structures in L2 acquisition.

PT follows the view on the language production proposed by Levelt's (1989) speech model, which overlaps to some extent with Kempen and Hoenkamp's (1987) and Garrett's(1976,1980) work. The basic assumptions of the language processing in PT are as follows:

1. Processing components are relatively autonomous specialists which operate largely automatically;

2. Processing is incremental;
3. The output of the processor is linear, while it may not be mapped onto the underlying meaning in a linear way;
4. Grammatical processing has access to a grammatical memory.

(Pienemann, 2005:4)

The key assumption is that language processing is autonomous due to the high speed at which it takes place. The second language learner cannot utilize internal language processing mechanism in the same way a mature native speaker can and is therefore constrained in his ability to process language. In order to process language at high speed, the speaker is required to store grammatical information about parts of the sentence s/he produces in short-term memory. Depending on the availability of particular processing procedures, the learner can unify this grammatical information at different levels of sentence constituents (between NP and VP or inside NP,etc). This process of unification is necessary because the output in language production is linear but the mental processes of language production are not. Now if a processing procedure is not available to the language learner, the whole system will be shut off and the utterance will be produced in a linear fashion. (Pienemann, 1998).

Based on Kempen and Hoenkamp's (1987) Incremental Procedural Grammar, a set of grammatical encoding procedures is formed according to their sequence of activation in the language production process. The processing procedures in PT hierarchy are as follows:

1. the lemma procedure
2. the category procedure (lexical category of the lemma)
3. the phrasal procedure (instigated by the category of the head)
4. the S-procedure and the target language word order rules
5. the subordinate clause procedure - if applicable

(Pienemann, 2005:9)

PT claims that this sequence follows an implicational pattern where each procedure is a necessary prerequisite for the following procedure. L2 learners are claimed to build all of these procedures, apart from the first one (de Bot, 1992).

> " A word need to be added to the L2 lexicon before its grammatical category can be assigned. The grammatical category of a lemma is needed before a category procedure can be called. Only if the grammatical category of the head phrase is assigned can the phrasal procedure be called. Only if a phrasal procedure has been completed and its value is returned can Appointment Rules determine the function of the phrase. And only if the function of the phrase has been determined can it be attached to the S-node and sentential information be stored in the S-holder." (Pienemann, 1998:80)

In order to explain the above hierarchy in relation to grammatical structure in individual languages, PT has applied Lexical-Functional Grammar (Bresnan,Kaplan et al., 1982; Bresnan, 2001), which is a typologically and psychologically plausible grammar theory. According to Pienemann (1998), LFG, which share the key aspects with Kempen and Hoenkamp's (1987) IPG, is efficient to analyze the psycholinguistic process of grammatical information exchange. LFG consists of a constituent structure information exchange. LFG consists of a constituent structure (C-structure), a lexicon, a functional structure (f-structure) and an argument structure (a-structure). A-structure is mapped onto F(functional) structure, The semantic argument roles like 'agent', 'beneficiary', 'experiencer',etc are mapped onto grammatical functions. C(constituent) structure is mapped onto f(functional) structure via the process of feature unification. Both processes play a significant role in the explanation of SLA within the PT framework.

The original PT proposed in 1998 was to explain learners' L2 morphosyntactic development.

Three PT-based hypotheses have recently been put forth to extend PT beyond its scope of developmental levels of morphological-syntactical constructions. The PT extensions seeks to account for learners' structural choices as reflections of their L2 development of the syntactic-pragmatic interface (Pienemann et al. 2005). We shall consider all three of these hypotheses in this study, namely the Topic Hypothesis (TOP), Unmarked Alignment Hypothesis (UAH), the Lexical Mapping Hypothesis (LMH) .

According to Unmarked Alignment Hypothesis (UAH) the language acquirer preserves canonical word order in the organization of the syntax in a language. The UAH states that:

> "In the second language acquisition learners initially organize syntax by mapping the most prominent semantic role onto the subject(i.e. the most prominent grammatical role). The structural expression of the subject, in turn, will occupy the most prominent linear position in c-structure, namely the initial position." (Pienemann et al., 2005:229)

The Topic Hypothesis(TOP) on the other hand captures the beginning of a differentiation of Topic and Subject as discourse functions in SLA. It allows a wider range of syntactic variability and expressiveness predicting the c- to f- structure mapping. TOP is assigned to the most prominent position within the sentence, which is the sentence initial position.

Table 1 shows the developmental sequence proposed by the Topic Hypothesis.

Processing procedures	**Discourse principle**	**c- to f- mapping**	**Structural outcomes**
S-procedure	Topicalisation of core arguments	TOP=OBJ	The TOP function is assigned to a core argument other than SUBJ
	↑	↑	↑

Phrasal procedure	XP adjunction	TOP=ADJ	Initial constituent is a circumstantial adjunct or a FOCUS WH-word. TOPIC is differentiated from SUBJECT.
	↑	↑	↑
Category procedure	Canonical word order	SUBJ=default TOP	TOPIc and SUBJECT are not differentiated

Table 1 : Predicted developmental sequence of the Topic Hypothesis (after Pienemann et al. 2005, Kawaguchi, 2005)

There are three steps that L2 learners are predicted to follow in the development of assignment of topic. Initially L2 learners do not differentiate between TOP and the subject (SUBJ) of predicate. In other words, they use SUBK as the TOP and this is indicated by SUBJ=default TOP on the bottom row of Table 1. In this step, the subject is assigned the most prominent position, actually the sentence initial position, therefore forming a canonical word order such as SVO (in some cases SOV). In order to form the canonical word order, the learners use direct mapping of the conceptual structure (a-structure in LFG term) onto the grammatical functions (c-structure in LFG term) then further onto the linguistic form (c-structure in LFG term). (Bresnan, 2001; Pinker, 1984). For example, this direct mapping for the arguments, *a cat* and *a fish* in a sentence *a cat ate a fish* is shown in Table 2. The processing procedure required for this step to emerge is the category procedure.

Agent		theme/patient	semantic roles (a-structure)
↓		↓	↓
SUBJ	eats	OBJ	grammatical functions (f-structure)
↓		↓	↓
cat		fish	linguistic form (c-structure)

Table 2 : Direct mapping of the arguments

After this initial step, the L2 learners become able to add an ADJUNCT (ADJ) to a canonical string: XP + canonical word order. Example of ADJ are expressions for adverbial phrases time or place such as *in the morning/at school/ yesterday*, and focus WH-words such as *what*. During this step, ADJ is topicalized and it is indicated by TOP=ADJ. The phrasal procedure is necessary for this step to emerge.

The addition of ADJ will lead the learners to the third step, where they become able to differentiate in the topicalisation of core arguments other than SUBJ. As an example may serve an object (OBJ) topicalisation. This step is indicated by TOP=OBJ in Table 1. The S-procedure is required for this operation. Di Biase and Kawaguchi (2005) and Zhang (2008) demonstrated that adult second language learners of Italian, Japanese and Chinese respectively developed syntax according to the sequence predicted in the Topic Hypothesis.

The Lexical Mapping Hypothesis predicts how mapping develops from constraints of the Unmarked Alignment Hypothesis to the non-default mapping principles of the target language (a- to f- structure correspondence).

> "L2 learners initially map the most prominent argument onto SUBJ and gradually learn how to attribute prominence to a particular thematic role, promoting the patient (rather than the agent) role to

SUBJ, first in single clauses such as in Passive constructions and later in complex predicates such as Causative constructions."

(Di Biase & Kawaguchi, 2005)

This hypothesis assumes that learners gradually attain skills to map less prominent thematic roles (i.e. patient role) onto the subject function in structures like passives and causatives. This non-canonical mapping of argument roles onto the grammatical function requires additional processing.

2.2 Typology of Russian and brief sketch of its grammar.

Russian is a Slavic language in the Indo-European family. A typological characteristic of the Russian language is its highly rich morphology. Russian nouns that fall into masculine, feminine or neuter grammatical gender consist of a stem and inflections that are assigned to it at the lexical (lemma) level. The inflections indicate the gender(masculine,feminine and neutral), the number (singular or plural) and the case on the noun and exhibit form variation. A single inflectional morpheme may be used for several different morphological constraints which make the case system complex and highly irregular. In English, functional roles are identified through word order while in Russia, case endings on the nouns identify the subject, direct or indirect object. There is no one-to-one relationship between form and function because forms are often homonymic. Fro example form "dom"/house can be used as a subject in NOM case and can be used as object in ACC case, the form of this word would stay the same. There are six cases(nominative, genitive,dative, accusative, instrumental and prepositional) marked in the language,each expressing a different function for each gender of noun or pronoun. Nouns and adjectives in Russian agree in gender, case and number. Pronouns are characterized by person, number and have different inflectional forms in different cases.

Verbs in Russian agree with subjects in number, gender/person .Due to the rich inflectional morphology the subject in the sentence can be omitted as the relevant information is retrievable from the verb inflection. But Russian is not a pro-drop language and the omission of the subject happens mostly in the spoken language or in impersonal constructions. In spoken language the subject is omitted because it is known who is the subject and because spoken language can be characterized by its tendency to use contracted forms and short sentences. In impersonal constructions the subject is omitted because the agent of the action is unknown or unnecessary. This construction is used in both written and spoken language.

Verbs determine the case of the direct object, in most cases they require an accusative case but sometimes it can be dative.

Prepositions also require a specific case marking (instrumental or prepositional) of the nouns or noun phrases that form a PP phrase with it.

The order of major constituents in the sentence is determined not so much by syntactic factors as in English with relatively fixed word order but mostly by pragmatic factors. Thus, word order in Russian is flexible and there are six possible permutations (SVO, SOV, VSO, VOS, OSV and OVS). Orders where the object precedes the subject are rare even though all orders are grammatically acceptable. SVO is the most common word order in Russian, it serves as a neutral (default) word order. (Shvedova, 1980)

Learning the pragmatics behind this free word order and its connection with the rich inflectional morphology are the greatest difficulties faced by learners of Russian. The main cue used for sentence comprehension is the case-marking system.

Russian does not have a class of auxiliary verbs. Thus, in Russian interrogative sentences a word order is the same as in affirmative sentences. In case if it is a yes/no question the differentiation between affirmative and interrogative lies only in the intonation. In case of WH- questions , WH-words are placed at the front position in the sentence and the other

constituents order according to the pragmatic and communicative intentions of the speaker. There is no strict or preserved word order in the interrogative sentences.

Negation in Russian can be sentential or constituent. It is possible to have negative concord within one sentence. If the constituent is negated, the negation is placed in front of it - NEG+V, NEG+VP, NEG + N, NEG + NP, etc

(3) On nikogda (NEG) tam ne (NEG) bival.

| | | | |

He never (NEG) there not (NEG) been.

He has never been there.

The morphosyntactic features of Russian language mentioned above play an important role in the application of PT on the study of acquisition of Russian as L2.

2.3 Proposed PT-based hierarchy for Russian.

A Russian PT-based hierarchy is proposed next to serve the assessment of Russian language specific-processing routines. The present study focuses on the determination of the prerequisite level of language development for the acquisition and production of a specific passive-like construction ins Russian(namely impersonal sentences) (see Chapter 3) . Thus, for building the hierarchy of processing procedures I will consequently look at different levels of language representation: morphology, syntax and discourse, and I will assign the procedures required for processing linguistic information at every level of interlanguage development.

Description of the structures and their status in the proposed hierarchy can be seen in Table 3. This PT derived hierarchy is hypothesized on the basis of information exchange between constituents: gender/case/number agreement, subject-predicate agreement, etc. It is assumed that these structural features are maintained throughout the developmental process and

underlie other more complex structures that do not have to be decided on every time a refreshment of the parts of the structures is made. (Pienemann, 2005) In other words the hierarchy is defined as a specific range of morphosyntactic structural options of Russian available to the learner.

The selected structures presented in Table 3 distribute over the four levels of the Processability hierarchy: lexical > phrasal > inter-phrasal > inter-clausal. The prediction of the hierarchy imply that:

1) number and case marking on nouns will be acquired before the number and case agreement in NP s, meaning that at first a learner will acquire different forms of one word: like singular and plural form on a noun, but it does not imply that the agreement between such features as number,case of gender within the noun phrase will be acquired at the same time;
2) the number and case agreement in NP and VP will be acquired before the Subject-predicate/predicative adjective agreement; etc .

Level of development	Processing procedures	Structural outcome
Level 5	Subordinate and complex clauses procedure (inter-clausal)	Indirect questions, compound and complex sentences.
Level 4	S-procedure (Inter-phrasal)	SV agreement
Level 3	Phrasal procedure	Agreement in NPs NEG+XP negative concord ADV-front WH-front

		SVO
Level 2	Category procedure	Number marking (sg/pl) Case marking (NOM, ACC) V tense and person marking
Level 1	Word or lemma access	

Table 3 : Proposed hierarchy for Russian L2

The proposed hierarchy is based on previous empirically-based hierarchies of typologically different languages which proved the hypothesis of cross-linguistic value of PT. (Pienemann,1998, 2005) First hierarchies for English, German and Swedish languages were proposed by Pienemann (1998) . Every developmental procedure proposed in these hierarchies was tested on L1 and L2. It appeared the there were almost no differences in developmental steps between L1 and L2 of a given language and that most of the procedures hold for typologically different languages. So most of the procedures in the proposed hierarchy are standard with adjustment to typology of Russian language. For any language developmental steps would be the same and would follow the major idea of language processing: first the learners learn to process simple words (by making references between real object and the name of that objects) without realization of the category features of these words; later they start to distinguish between category features of different words without yet realizing the functions different forms of a word can have; the next step is the ability to pass the category features of one word to the phrasal level and checking that they match the other constituent of a phrase in order to achieve agreement within the phrase then the same procedure applies when from phrasal level these features are passed to the sentential level. Each level or procedure in this hierarchy is discussed separately below.

Level 1: lemma procedure: new words are added to the lexicon.

Level 2 : (lexical/category procedure) : LFG is a lexicalist theory where syntactic structure is driven by the lexicon. Word structure is different from phrase and sentence

structure as the order of elements in morphology is always fixed (Falk, 2001). Lexical and form variation of nouns in terms of number and case is the characteristic of this procedure. Such features characterize the major lexical categories such as nouns or pronouns. Nominative and accusative cases are assumed to be the default markers for core grammatical relations. Nominative ending of nouns mark the subject function. The recognition of nouns with nominative case inflection is faster tan other case inflections which was proved by several test.(Lukatela et al., 1978). The direct object is in most cases expressed by accusative case. The lexical form variation of a noun such as 'sobaka' (dog) is illustrated lower. We can see that this procedure does not require any exchange of information with other constituents and is therefore computed at the lexical level. The task for the learner at this level is to acquire the singular/plural alternation expressing values of the NUM(ber) feature and the nominative/accusative variation for the case feature.

(4)

sobaka	N, PRED = 'dog' NUM = SING GEN = FEM CASE =NOM	sobaku	N, PRED ='dog' NUM = SING GEN = FEM CASE = ACC
sobaki	N, PRED = 'dogs' NUM = PL GEN = FEM CASE = NOM	sobak	N, PRED = 'dogs' NUM = PL GEN = FEM CASE = ACC

The ability of the learner to use and process other cases depends on the frequency-based processing and because they do not play such a distinctive role as (NOM/ACC) case in sentence comprehension they are omitted in the hierarchy. But during the production tests I will take into account the frequency of usage of cases other than nominative and accusative

and will try to see whether there are any correlations with the learners level of IL development.

As in the case with noun case, gender and number marking, person(gender – in case if the verb is used in Past tense and singular form) and number marking in verbs does not require any information exchange with other constituents so this procedure could be acquired at second level (category procedure). When I say ' no information exchange with other constituents' at this level I mean that such category features as gender and number in verb inflection are realized without their connection to other constituents. Learners just add new forms of the same word to their lexicon, they don't yet connect the changes in verb inflection with its subject categories.

Verbs and adjectives often show frequency-based processing (Feldman et al., 1987; Gor and Chernigovskaya, 2001) My consideration to put the verb marking of tense and person was based on the Gor and Chernigovskaya investigations. They claim that there are few stems of Russian verbs that are acquired earlier than others (by L1 and L2 learners of Russian) due to their high frequency in vocabulary. These stems and the rules of their conjugations are very often overgeneralized so the type of conjugations and system of personal endings are transferred to other stems. Thus, the learners form kind of a " default system" of personal endings for Russian verbs.

Concerning the development of topicalisation function, at this level of language development with accordance of Topic Hypothesis the learners assign a subject of the sentence to the most prominent position in the sentence. Therefore they use only canonical word order which requires the minimum of their processing skills.

Level 3(Phrasal) : NP structures require the phrasal procedure that is, feature unification between constituents in the phrase (NUM, GEN and CASE). In every case the values of the features expressed in the agreeing elements must be compatible: if the value of

the nominal NUM feature is SG then the feature of the agreeing modifiers must also be SG..

(5) Krasivaya devochka (a beautiful girl)

Krasivaya	ADJ, PRED ='beautiful'	devochka	N, PRED ='girl'
	NUM = SG		NUM = SG
	GEN = FEM		GEN = FEM
	CASE = NOM		CASE = NOM

Krasivuyu	ADJ, PRED ='beautiful'	devochku	N, PRED ='girl'
	NUM = SG		NUM = SG
	GEN = FEM		GEN = FEM
	CASE = ACC		CASE = ACC

To sum up , in order to achieve the process of unification, the learner must identify the head of the phrase and exchange the feature values information with the modifiers.

At this level learners also learn the position of negation in front of a particular sentence constituent. In Russia negation for verbs and nouns does not differ as in English (no and not) , for negation of any sentence constituent or sentences itself the negative “ne”/no is used. See example (3). Negative concord in (3) is a typological characteristic of Russian.

At the level 3 according to the PT Topic Hypothesis the learners move from the Unmarked Alignment Hypothesis (UAH) to first deviations of the canonical word order. They start assigning the most prominent position to WH-words and adverbials. Many test on German, Swedish and English L2 acquisition prove that assignment of XP adjunctions changes the one-to-one mapping of UAH and marks the beginning of the development of TOP function. (Clahsen, Meisel & Pienemann, 1983; Pienemann, 1981, Pienemann & Hakansson, 1999).

Level 4 (Inter-phrasal): This inter-phrasal level of information exchange corresponds

to the level of the sentence which requires exchange of information between phrases with different heads (Di Biase and Kawaguchi, 2002). The lexical entries in the following example show the information distribution between various phrasal elements.

(6) Mama N , PRED = 'mother'
NUM = SG
GEN = FEM
CASE = NOM

byla V, PRED = 'to be' < SUBJ,COMP>
TENSE = PAST
PER = 3
NUM = SG
GEN = FEM

krasivaya ADJ, PRED = 'beautiful'
NUM = SG
GEN = FEM
CASE = NOM

'Mother was beautiful'.

The noun ' mama'('mother') and the predicative adjective 'krasivaya' ('beautiful') must agree in number and case(Singular and Nominative) as well as in gender (feminine). The copula 'byla' ('to be') also agrees in number and gender with the subject.

To conclude, learners at this level must match feature information for gender, number and/or case across different phrases. Form variation in terms of gender (feminine, masculine and

neuter), case and number is used as a pointer whether the learners have acquired this level.

Level 5: the main characteristic of this level is the development of inter-clausal procedures like mood modification in main and subordinate clauses, etc.

The hierarchy just illustrated above is proposed as a metric to test language attainment in L2 Russian learners and to predict what are the prerequisites for production of impersonal constructions. According to the hierarchy the production of impersonal constructions is possible only at the attainment of procedures of level 4. At this level the learners are supposed to be able to unify features across the phrases of the sentences, to realize the role of case marking in the comprehension of the sentence and its role in the free word order. It is also possible at this level of language development to assign the TOP(topicalisation) function to a core argument other than SUBJ.

CHAPTER 3: Impersonal constructions in Russian.

3.1 Main characteristics of impersonal constructions in Russian.

impersonal sentences belong to a class of sentences which is characterized by the absence of the subject in the sentence and by the presence of the predicate in the form of third person plural. The object (patient) is always propagated to the initial position in this type of sentences. This type of sentences are available in all tenses: present, future and past, and in two moods: imperative and indicative.

These sentences are used to inform about the particular actions but without the indication of the agent of this action. The agent is not present in the grammatical structure of the sentence and is assumed to be an indefinite or unknown person or a group of people.

(7) Okna vimili.

Windows(ACC, PL) clean(3d, PL, PAST).

'The windows were cleaned. '

(8) Detei nigde ne videli.

Children(ACC,PL) nowhere not see(3d,PL,PAST)

'Children were not seen anywhere'

In the sentences of that type the main information conveyed is the information about the action performed. It is important to mention that in the sentences of that type the notion of number is reconsidered because the plural form of the predicate does not imply the plural form of the presupposed subject.

The absence of the subject reflects the intention of the speaker to draw attention to the action and its patient. This quality makes these sentences look like passive constructions and to be used instead of passives. Compare the two examples (9) and (10):

(9) impersonal construction

Mashinu vipustili v 2002 godu.

Car (ACC, CG) produce(3d,PL, PAST) in 2002 year.

'The car (they) produced in the year of 2002.'

(10) Passive construction

Mashina vipushena v 2002 godu

Car (NOM, SG, MASC) produce(PASSIVE, 3d, SG, MASC) in 2002 year.

' The car was produced in the year 2002.'

Thus, basing on the similarity of the motivation for the production of both types of sentences I assume that the acquisition of impersonal constructions looks like the acquisitiong of the passives. But there exists a syntactic difference between two types of structures that definitely influences the acquisition pace of every construction. Impersonal constructions as passives require the following procedures to be acquired – at the phrasal level: case marking (NOM, ACC), number/person/tense marking, agreement within an XP; at inter-phrasal level: inverted word order; from Topic Hypothesis point of view it is also necessary to acquire the difference between subject and object and their roles in the sentence as agent and patient. The difference between two construction lies in the application of syntactic procedures: in impersonal constructions the learners have to use inverted word order and plural form of the verb which allows to topicalize the patient and to create the anonymity of the agent; in passives the learners have to promote object to subject position, apply the rules of subject case marking and keep the agreement between new promoted subject (patient) and the predicate of the sentence. It is necessary for the learners to realize not only that the omission of the subject is important but also that the plural form of the verb is required. Russian is not a pro-drop language but its rich verbal morphology allows to drop a subject and to interpret a sentence and the subject of the sentence by the personal ending of the verb. Plural form of the verb in

impersonal constructions is used for emphasis on the indefiniteness or unimportance of the agent. No explicit subject-verb agreement can be seen in the impersonal constructions which differs them from passive constructions where the patient becomes the subject of the sentence and it agrees with the passive form of the predicate. No explicit agreement (as subject-verb agreement) makes the impersonal constructions quite complicated for the acquisition and requires to manipulate with word order rules and morphological markings in a more abstract and sophisticated way. Thus, it follows that the acquisition of impersonal constructions is possible at a high level of interlanguage development. For better understanding of correlation between the level of L2 learner IL and his/her ability to produce particular structures I will look in the next section at the variety of pragmatic-syntactic choice available in Russian language and their distribution over the proposed hierarchy of processing procedures for L2 Russian.

3.2 Pragmatic-syntax choices in Russian: motivation for these choices.

Speakers are always faced with different choices of syntactic form, and they are free to make their choice in terms of how to express their intention. The factors that influence the speaker's choice to favor the passive or active constructions are varied. One of such factors is the establishment of discourse topicality. Usually the notion of discourse topic is defined as " the proposition (or a set of propositions) about which the speaker is either providing or requesting new information".(OchsKeenan &Schieffelin, 1983:68). The pragmatic presupposition also affects the choice of syntactic structures. Bock (1977:723) hypothesized that "alternative surface structures are used differentially in order to array the information in sentences with given information preceding the new information." Bock found that when the semantic patient was given information or the pragmatically presupposed information, it was more likely to be positioned before the semantic agent. He suggested that it was the

motivation for producing the passive construction. I assume that this suggestion holds for the production of impersonal constructions in Russian. For understanding the motivation for the usage of different type of structures it is also important to see what is the range of the available structures in Russian.

The description of default and non-default mapping skills is necessary to complete the picture of their language use given the typological characteristics of Russian. Russian native speakers, as I mentioned earlier, rely on morphological markings and word order in sentence comprehensions (Slobin, 1973; Urosevic et al.,1988). In order to test the pragmatic-syntax structures of the language it is necessary to propose a selection of structures that would capture the deviation from the default Unmarked Alignment Hypothesis (UAH, see Chapter 2). Russian topic-comment structure allows for any constituent in the sentence to be emphasized by assigning a more prominent position, in linear order, to the topicalized element.

Differentiation between Topic and Subject in Russian can be achieved by alternative word order that disrupts the linearity of the UAH. A speaker is able to assign the TOP function to a core argument other than SUBJ by mapping it onto the most prominent (first or early) position in the sentence. Consider the following two structures, one of which (a) shows the default word order in Russian while the other one (b) shows alternative word order with the object being assigned prominence by placing it in initial position:

(11) Papa(SUBJ) s'yel(PRED) tort (OBJ) SVO (default word order)

Father(SUBJ) ate (PRED) cake(OBJ)

'Father ate the cake'.

(12) Tort(OBJ) s'yel(PRED) papa(SUBJ) OVS (non-canonical word order)

Cake(OBJ) ate(PRED) father(SUBJ)

'It was the cake father ate.'

In this example, the object of a transitive verb has been topicalized and assigned the first position in the sentence demonstrating the OVS word order. This does not require any change of the morphological properties of the directly marked NPs. The object is still marked by accusative case and the sentence is in active voice. To be able to alternate the word order, the L2 learners must rely on the morphological markers for the sentence comprehension and not on the word order. Thus, word orders such as OVS or OSV can be expected as examples of topicalisation when the speaker is able to assign the TOP function to a core argument other than SUBJ (Pienemann, 2005). This implies that functional assignment (S-procedure) must be in place.

Further, Russian also allows a different role mappings onto grammatical functions altogether, for example with the passive voice. Basic passive voice in Russian requires similar processing procedures and resources that were described for the Lexical Mapping Hypothesis (LMH, see Chapter 2). It involves the mapping of the patient onto the Subject function and suppression of the agent role or it demotion to a non-core adjunct function (Bresnan, 2001). Passives are not widely used in Russian due to the flexibility and effectiveness of the free word order. This further deviates from the default SVO and relies on additional mapping principles and exceptional lexical entries.

(13) Active voice

Agent		Patient (thematic role)
|		|
Subject	Verb	Object (grammatical function)
|		|
Papa	s'yel	tort (constituent structure)
Father(NOM)	eat(3d,sg,PAST)	cake(ACC)

'Father ate the cake.'

(14) Passive voice

Patient Agent

SUBJECT	ADJUNCT
Tort	papoy
Cake-NOM,MASC	by-father(INSTR)

VERB: s'yed-en — eat(3d,sg,MASC, PASSIVE)

'The cake is eaten by father.'

As the patient is mapped onto the subject function it receives nominative case ending. A passive particle (-en) is added to the perfective verb stem and the agent may be expressed as an ADJUNCT and marked by INSTR(instrumental) case. L2 learners of Russian must demonstrate the use of these processing routines and morphological marking on the elements of the sentence. But as I have already mentioned many times Passive voice is not often used in Russian, instead of it impersonal constructions are used.

The focus of this study is the acquisition of impersonal constructions. By their pragmatic intention they can substitute passive voice because they are characterized by the omission of the agent of the action and by the position of the patient at the beginning of the sentence. Although it is important to mention the patient keeps its marking as the object of the sentence and the verb takes the plural form which does not imply that the subject is plural like in (15a).

(15) impersonal sentence

Morkovku	s'yel-i	O- Vpl
Carrot(ACC)	ate(3d, PL, PAST)	

'The carrot is eaten.'

(15a) example of the possible use of (15) in a dialogue

A: A gde morkovka?

And where carrot (NOM)?

'And where is the carrot?'

B: Morkovku syeli.

Carrot(ACC) eat(PAST,3 pl).

'The carrot is eaten'.

A: Kto syel morkovku?

Who eat(PAST, 3sg) carrot (ACC)?

Who ate the carrot ?

B: Papa syel morkovku.

Father(NOM) eat(PAST,3sg) carrot(ACC).

In this example the patient has been topicalized and assigned the first position in the sentence. The verb takes the plural form and the agent of the action is omitted. Processing of that structure implies that the functional assignment (S-procedure) must be in place which means that all the procedures from level 1 to level 4(see Table 3) must be acquired: number/gender/case/person/tense marking, default and non-default word order, XP internal agreement, inter-phrasal agreement, ability to promote WH-words and adverbials and other sentences constituents to the initial position of a sentence,etc. But the question is whether the acquisition of S-procedure is enough for the production of such sentences. The choice of such construction is defined by pragmatic intentions of the speaker which are very close to the intentions for the passive voice use because the focus of the speaker is the action performed and the agent is not important, so it is omitted and the verb form does not specify the agent and takes the neutral plural form.

According to the hierarchy I hypothesize the following:

Hypothesis 1: Impersonal constructions can be produced by the learners at the level 4 of their IL.

Hypothesis 2: The comprehension of impersonal constructions precedes the production and is possible at level 3.

I will also try to find the asnwers for the following questions that can provide evidence for support of my hypotheses:

1. How does the PT hierarchy of Russian L2 look like?How many levels does it have and which procedures correspond to which level?
2. At what level of language IL development the learners of L2 Russian will be able to produce and to comprehend IMP constructions? What are the prerequisites for comprehension and production of these constructions?

These hypotheses and questions will be addressed in the following chapter.

CHAPTER 4: Empirical study of acquisition of impersonal constructions in Russian.

In this chapter, i am going to present the research design for my studies and describe the methods of data elicitation and analysis for the production and comprehension of impersonal constructions.

4.1 The informants.

In order to investigate the research questions and to test the proposed hypothesis I looked at thedata from 11 L2 learners of Russian at different levels of interlanguage development. Additionally I applied the tasks to 2 native speakers of Russian in order to test the naturalness of the tasks. Informants have different L1 background : Dutch, Lithuanian, German, Arabic and French. All the learners studied Russian in an instructed environment outside the country of the language. I did not consider L1 difference in the data results and make no conclusions for each particular L1 environment. I deliberately chosen learners with different L1 in order to draw highly generalized conclusions. In addition with the native speaker control group the selection of different L1 backgrounds provides a broader basis for testing the hypotheses and making claims about the acquisition of impersonal constructions by the learners disregarding their L1. Below is the table 4 of participants and their L1, number of years they have studied Russian.

Pseudonym	Native language	Duration of studies
Iyad	Arabic	6 months
Maria	German	6months
Tim	Dutch	1 year
Pierre	French	1.5 year
Stefan	German	2 years
Remco	Dutch	3 years
Nienke	Dutch	4 years
Indre	Lithuanian	6 years
Angelina	Lithuanian	6 years

Lilian	Dutch	8 years
Vidas	Lithuanian	8 years
Marina	Russian	Native speaker
Valeria	Russian	Native speaker

Table 4 : Table of participants.

4.2 Research design.

In my study I examine the acquisition of the impersonal constructions (IMP-constructions) in L2 Russian. My hypothesis is that the learners require to reach at least level 4 of IL development according to the PT hierarchy in order to be able to produce IMP-constructions because at level 4 they should have at a disposal all the needed procedures: case marking which helps to distinguish between syntactic roles of the constituents and to interpret the meaning, number/gender/tense markings, agreement inside XP, subject-predicate agreement, promotion of the topic (WH-questions, adverbials, objects) to the initial position in the sentence and non-default word order. I also hypothesize a different pace for the comprehension and production of the IMP constructions in L2 Russian. I divided my study into two sub studies: in a first step I elicit spontaneous oral speech data to establish the current state of interlanguage development within the PT hierarchy. In order to elicit the oral data I applied a range of elicitation tasks. Table 5 provides the overview of all the tasks I used at this level of my study. The data produced by the learners was then used to create a linguistic profiles using the techniques that are used in Rapid Profile system. Rapid Profile is a computer-assisted procedure used to assess language learners' level of development. This is done by collecting speech samples from the learners and comparing them to standard patterns in the acquisition of the target language.Rapid Profile was developed from standard Profile Analysis (Crystal, Fletcher & Garman, 1976) which was based on an interview, a fulltranscription of the interview and a detailed analysis of the transcript. Rapid Profile is a shorthand version of the original procedure. The principle behind linguistic

profiling is rather straightforward. Language development (first or second) follows a standard schedule (hierarchy) . Therefore a speech sample collected from a learner allows the analyst to locate the patterns found in the sample within the overall regularities of the standard development schedule. (Pienemann, 1998, 2005).

In general, the analysis of the every utterance follows this way:

1) for every utterance the analyst checks what procedures have been applied for production (these procedures are the same ones mentioned in the hierarchy for a specific language), whether the application of the procedures was correct:

e.g. Malchik chitayet knigu.

Boy(NOM, sg, masc) read(3 sg, PRESENT) book(ACC, sg, masc).

'A boy reads a book.'

Procedures applied: case (NOM, ACC) and number(sg) marking, verb inflection(3d person singular), subject-predicate agreement, SVO. So for the example sentence the results of the analysis are as follows:

- case marking – 2 out of 2 (means that 2 times the learner correctly marked the case for 2 NPS)
- number - 2 out of 2
- verb inflection – 1 out of 1
- subject-predicate agreement – 1 out of 1
- word order – SVO

e.g. * Malchik chitat' kniga.

Boy(NOM, sg, masc) read(INF) book(NOM, sg, masc).

'A boy reads a book.'

The analysis for this utterance will be as follows:

- case – 1 correct usage out of 2 (kniga/'book' was marked as NOM which is incorrect, it should be ACC because it is the object of the sentence)
- number – 2 out of 2
- verb inflection – 0 out 1 (infinitive is a not a personal form of the verb and it does not agree with the subject of the sentence)
- subject-predicate agreement – 0 out 1
- word-order SVO

2) for every utterance the analyst should count how many time each procedures should have been applied and how many times it really was applied correctly.
3) Number of correct applications of a procedure in a given utterance and a number of 'necessary' applications of this procedure for a given utterance are compared. It can be called the precision of the procedure application: number of correct applications divided by the number of the 'required' applications of a particular procedure given the partucar utterance .
4) Once for every utterance the precision of a particular procedure is calculated it is possible to calculate average precision over the test for a particular procedure . If the average precision \ is higher than 0.8 then the procedure is considered acquired.

Learners that take a profiling test are offered a range of profiling tasks which imply the usage of all the procedures which are included in the processing hierarchy of the tested language (see Table 5). In Rapid Profile System if the learners 8 or more times out of 10 correctly apply a particular procedure then this procedure is considered acquired. If all the procedures of a particular level of the processing hierarchy are acquired then the level is considered to be acquired as well. If some of the procedures of a level are not acquired fully then the level is

considered to be under development. This is the main principle for the analysis and testing of the level of IL development. (Kessler, 2008; Kessler and Keatinge, 2008). In Rapid Profile the number of the utterances produced by the learner does not greatly influence the results of the tests because if the learner does not use or avoids using 'expected' constructions then it means he/she does not have yet acquired the necessary procedures for the production of the 'expected' output. Although it is very important for the participants of the test to respond for every task in order to provide a possibly wider range of acquired procedures and constructions.

Task type	Elicited structures
Habitual actions	Subject-predicate agreement, case-marking, word order, types of constructions
Story telling	
Interview card	Questions: general and special(WH), word order

Table 5: Overview of the elicitation tasks(linguistic profiles)

Knowing about the current level of IL for every learner I asked them to work on carefully designed tasks to test both the comprehension as well as production of the IMP constructions. All informants worked on the comprehension task first and only then on the production tasks.

Table 6 illustrates the elicitation tasks(IMP-constructions) for that part of the study:

Task type	Comprehension/Production
Sentence comprehension (listening)	comprehension
Question answering	production

Table 6: Tasks for the testing of IMP-construcion acquisition

Let me now to describe in details the different tasks specified in tables 5 and 6 before the results are introduced and discussed.

4.3 The Tasks for data elicitation.

4.3.1 Profiling tasks

In the first part of the data collection communicative tasks were administered to elicit the subjects' current state of IL development in L2 Russian. The tasks included habitual actions description, story-telling and asking questions(interview card). As I have already mentioned the profiling tasks were repeating the approach of testing implemented in Rapid Profile system. For every learner there were assigned level of language development and the range of syntactic structures that s/he produced during the tasks. All the tests were recorded and later evaluated. During this test I checked different language phenomena which reflects the development of processing skills: case marking, number marking on nouns, pronouns, agreement within NP, subject-predicate agreement, tense and person marking on verbs, word order and topicalisation, positioning of the negation, positioning of WH-words and adverbials - in other words, all the procedures from the hierarchy for L2 Russian.(See Chapter 3) Every type of tasks was motivating the participants of the test to provide different constructions and apply different procedures: at habitual action test participants are expected to produce different types of sentences in the active mood, using a correct verbal inflection, case/number/gender markings and agreement between constituents of the sentence; at the interview card tasks the learners were expected to produce different questions. The task of story provided the learners with the possibility to use different tenses, types of sentences(simple,complex or compound), applying non-default order rules.

The Habitual action test included 8 pictures illustrating the day of a small girl – she wakes up, she is doing morning exercises, etc . On the pictures she was shown alone or with other people. The participants of the test were asked to provide at least 1 sentences for every picture, describing the average day of a small girl. Maximum number of sentence per picture was 3 sentences.

Interview card test consisted of 10 things about which the participants have to find out information from an imagined interviewee by asking him/her questions. Participants were free in their choice of types of questions – Y/N or WH-questions.

Story-telling test consisted of a sequence of 8 pictures illustrating the famous Russian fairy-tale. The participants were asked to build up a story according to the pictures so that for every picture min.1 and max4 sentences were provided. They were also asked to make the story as coherent as possible. In this test I was focusing on word order, case-marking, topicalisation and person, number and tense inflection of verbs. This test forms the biggest part of the collection of the spoken L2 data.

All the utterances that were collected during the tests formed a spoken data of L2 Russian. Habitual actions task and interview card take around 5-6 minutes each, the story-telling task takes 15 minutes.

All the utterances produced during the tasks of the Profiling test were recorded, analyzed and the precision for every procedure mentioned in the proposed processing hierarchy of L2 Russian was calculated as described earlier.(See in 4.2) The results of the profiling test will be displayed and discussed lower.

4.3.2 Tasks for elicitation of impersonal constructions.

This test consists of two parts: comprehension task and production. The test was developed by S. Armon-Lotem et al.(2010) [1]

comprehension test consisted of two PPTs with 4 pictures on every page. All the pictures show the same group of people performing a particular action (combing, feeding, cleaning, etc) but the agent and patient of the actions differ on every picture. Every slide is

1. I gratefully acknowledge the use of materials and design of the passive experiment as developed by the COST A33 network in 2008, which were passed on to me by Angeliek van Hout

accompanied by a short audio track with the sentence in Russian describing one of the pictures on the slide. The participants need to listen to the track and say which picture it describes.

For this test I have chosen 20 transitive verbs. For every verb I created 3 sentences: two were the same but differed in word order – SVO and OVS; agent and patient roles in that two sentences were the same. And the third sentence described the the picture where the agent and patient changed their roles in comparison to the other two sentences. This third sentence was an impersonal sentence. All the verbs used in the test have an overt difference in inflection forms for 3d person singular or 3d person plural. The noun and noun phrases that were used in this tests showed an overt difference in NOM and ACC case marking. No homonymic forms of verbs or noun cases were used in the test.

(16) dogonyat' – to chase

SVO (1 condition)

Papa dogonyayet bolshogo

Father(NOM, SG,MASC) chases(3d, SG, MASC) big(ACC, SG, MASC)

malchika .

boy(ACC,SG,MASC)

'Father chases the big boy'.

OVS (2 condition)

Bolshogo malchika dogonyayet papa.

Big(ACC, SG, MASC) boy(ACC,SG,MASC) chases(3d, SG, MASC) father(NOM, SG,MASC)

'The big boy(ACC) follows the father(NOM)'.

OVpl (3 condition)

Papu dogonyayut

father(ACC, SG, MASC) chase(3d,PL,PRESENT)

The verbs were divided into two groups : 10 for female agent-patient pairs and 10 for male pairs. For every gender there were 30 sentences. Total 60 sentences. These 60 were again divided in to two groups: one half for comprehension test and the other part for production. Thus, for comprehension test I have 15 male sentences accompanied by 4 pics for every verb and 15 female. For every right answer in this test participants were getting a score – 1, for wrong answer – 0. All the wrong answers were analyzed in order to understand what comprehension of the sentence meaning was made by the particular participant and which picture s/he chose: with correct roles or reversal. Accounting for the wrong choice of picture explains what mistakes the learner makes during the comprehension and processing of the audio tracks: whether the case and verb inflection were interpreted correctly, whether the word order is understood the right way.

For production test the participants were give the verb infinitive in Russian, one picture and the question :" What happens to X? " . X could be a patient or an agent of the action. Thus, the participants were motivated for the use of appropriate word order in order to specify the information that was asked in the question:

(17) Picture showing how the father chases the big boy.

The infinitive given to the participant is ' dogonyat' (to chase).

The question :

Chto proishodit s bolshim malchikom?

'What happens to the big boy?'

Variant of the answer 1.

OVpl (IMP construction),score 2

Bolshogo malchika dogonayut.

Big(ACC, SG, MASC) boy(ACC,SG,MASC) chase(3d,PL, PRESENT)

'The big boy(ACC) (they)chase.

Variant of the answer 2.

OVS , score 1

Bolshogo malchika dogonayet

Big(ACC,SG,MASC) boy(ACC,SG,MASC) chase(3d,SG,MASC,PRESENT)

papa.

father (NOM,SG,MASC)

'The big boy(ACC) chases the father(NOM)'

Variant of the answer 3.

SVO, score 0

Papa dogonyaet bolshogo

father(NOM,SG,MASC) chases(3d,SG,MASC,PRESENT) big(ACC,SG,MASC)

malchika.

boy (ACC,SG,MASC).

'The father(NOM) chases the big boy(ACC)'.

The evaluation of this test depends on the focus of the question – if the focus was on the agent, then the expected word order would be SVO(default) and it would score 1, all other answers would be scored as 0. If the focus in the question was made on patient than the

scoring would be as illustrated in the example above: OVpl would score as 1, OVS would score as 1 and SVO as 0. OVpl and OVS score equally because in production part it is hard to motivate the participant only for the usage of one of the constructions. Both OVpl and OVS topicalize the object of the sentences and they differ in verb form and presence/absence of the subject. Apart from the choice of word order and structure, the correctness of case marking, verb agreement and verb forms were also taken into consideration.

This test were taken not only by the L2 learners but also the L1 native speakers in order to test the naturalness of the tests.

The results of the discussed test will allow me to realize the correspondence between the current level of IL of every participant and his/her performance in the comprehension/production test for the IMP-constructions. Profiling test allows to account for the acquisition of every single procedure that was taken into account in the Russian processing hierarchy (see Chapter 2). Knowing exactly which procedures are acquired and which level of IL is reached allows in its turn to trace the correspondence between the level of IL and the ability to perceive and produce IMP-constructions. My predictions are that the learner with IL level 2 and 3 would get the lowest results in the comprehension/production test in comparison to participants with higher level of IL because at the level 2 and 3 learners are able only to distinguish between different forms of one word but have not yet understood the role of case marking or verb inflection and the agreement between the constituents. So it means that such learners would not be able yet to understand inverted word order or the absence of the subject in the sentence. At these levels of IL I expect more mistakes in comprehension and productions tests because learners are not able to rely on case marking and verb inflection in sentence comprehension and will not be able to spot the correct picture or to produce a required construction due to lack of necessary processing skills. Learners with level 4 and 5 are expected to show almost error-free results in the

comprehension test because they have all important processing skills for understanding the sentences and spotting the right picture. But I also expect that learners with level 4 and higher will be able to produce the expected IMP-constructions or at least to use OVS word order in order to topicalize the particular constituent of the sentence.

4.4 The results.

Table 7 shows the profiling test results:

Pseudonym	Native language	Duration of studies	Level of IL
Iyad	Arabic	6 months	2
Maria	German	6months	2
Tim	Dutch	1 year	2
Pierre	French	1.5 year	3
Stefan	German	2 years	3
Remco	Dutch	3 years	4
Nienke	Dutch	4 years	3
Indre	Lithuanian	6 years	4
Angelina	Lithuanian	6 years	4
Lilian	Dutch	8 years	4
Vidas	Lithuanian	8 years	5

Table 7: Profiling test results for every participant.

In general we can divided all the participants in three IL development groups – beginners(level 2), intermediate (level3), advanced (level4) and there is one participant with native like level of IL(level 5).

The number of the participants per IL-level is small, therefore I will not collapse the results as group results but will present them as individual ones.

For every group there are very characteristic mistakes in the utterances that are importation to mention here:

Beginners(level 2):

Maria in two profiling test were always using only NOM case marking for nouns disregarding their syntactic-pragmatic roles and instead of personal forms of verbs she uses only infinitives. Maria's performance at both comprehension and production test showed that she does not yet understand the role of case marking and verb inflection for sentence comprehension: she many times chose reverse picture for OVS or OVpl structures. It means she could not correctly interpret the sentence because of the lack of processing skills. Also, in accordance with PT hierarchy predictions, she uses only SVO word order because it is the it requires the least processing costs.

Maria's utterances:

(17) *Devochka vstavat'.
*Girl(NOM, SG,FEM) get up(INF).
'The girl gets up'.

(18) *Malenkaya devochka kushat'
*Little(NOM, SG, FEM) girl(NOM, SG,FEM) eat(INF)
zavtrak.
breakfast(NOM/ACC,SG,MASC)

In (18) it is hard to say whether she really used ACC for 'zavtrak' (breakfast) or she just learnt once the fixed phrase. The word 'zavtrak' (breakfast) has the homonymic forms in NOM and ACC cases.

In the interview card test she asked a few standard grammatically correct questions which I believe were just learnt as a big chunk so in that case there was a correct placement of WH-word and the word order was appropriate for the situation. But in some questions which can be considered as non-trivial(not like “What is your name?” or “Where do you live?”) she put the WH-word in the end showing that she has not yet acquired the ability to promote WH-words to the initial position:

(19) Ty lyubish est kakaya

You(2d,SG) like(2d,SG,PRESENT) eat(INF) what(NOM,SG,FEM)

eda?

food(NOM,SG,FEM)

'What food you like to eat?'

Other participants of the same level of IL development showed the same mistakes in Profiling tests: no case marking on nouns, very rare agreement between adjective and noun in the NP, rare subject predicate agreement. Some of them, like Iyad, were trying to use other case-endings for the object nouns but often not correct ones. Although in the interview test they score on average higher than in other test which can be explained by the knowledge of fixed phrases which usually are learnt at the first language classes and are memorized without real distinction of cases, verb forms and word order. Also most of the participants of that level use very simple, one-two words sentences like : 'Utro' (Morning), 'Vot koshka' (Here cat) and etc. They mostly use the way of communication as pointing at objects or describing the objects on the pictures by simple adjectives: color, shape or size, attractiveness.

Intermediate (level 3) . Participants of level 2 showed the ability to build more complex sentences and very often provided the correct marking of objects in the sentence with ACC case. But they as well as the participants from level 2 still used only SVO word order and very often used infinitive verb forms as predicates.

Most of the participants in that group correctly defined the gender of the nouns and were using the correct form of the adjectives with that nouns which is predicted by the hierarchy. level 3 is the phrasal level and the learners at that level gradually acquire the intro-phrasal procedures. Also at that level they began to realize the possibility of adding WH-words or adverbials at the beginning of the sentence which reflects the development of TOPI(topicalisation) function. Nienke as well as Stefan both made no mistakes in Interview

card and were placing the WH-words at the right place and the word order in the question was appropriate. In the story-telling task Nienke used adverbials like 'utrom' (in the morning) or 'dnyom' (during the day) at the beginning of the sentences which complies with her level of IL development and with hierarchy predictions. Pierre in this test used very often female forms instead of required male ones.[2]

Advanced (level 4). There are 4 participants that were assigned level 4 of IL development according to PT hierarchy but it is important to mention that they all differ in their scores which means that some procedures at this level may require more time to learn and this level may be the most long in the learning process. This level defines the procedural climax because at this level the most of the procedures that are required for processing of simple sentences and for the acquisition of different word orders. But at the same time these procedures also need to get automatic in order for the learner to feel a higher level of fluency in the language. At this level the learners showed very good case marking, in general they were able to mark correctly not only NOM and ACC cases but also very often PREP and INSTR cases. In their speech appear lots of PP phrases.

Some of the participants very often substituted the subject noun by the pronoun and use verbs that can take two objects.

Also some innovations in word order in affirmative sentences are seen at this level.

(20) Lilian:

S-Oind-V-Odir

Mama (NOMSG,FEM) ey (DAT) na noch (ACC) chitayet

Mother(NOM, SG,FEM) to-her(DAT) for night(ACC) read(3d,SG,FEM,PRESRNT)

skazku(ACC,SG,FEM).

2 He explained this that while talking a lot to his Russian wife he tends to repeat her phrases which are, of course, marked as female. Although when he pays more attention to his words he correctly defines the gender and puts the right forms of adjectives with nouns.

fairy-tale (ACC,SG,FEM).

'Mother reads her a book at night'.

Most of the mistakes at that level are made in verb endings, very often the learners overgeneralize some stems and its conjugation rules and use the endings for the verbs of other stems. Although the endings are right for other stems they are not considered to be the right answer in the test. Apart from Lilian no one of the participants showed any changes in word order. But in interview card test they all scored high because mostly there were no mistakes in their utterances. Lilian was the only one who in story-telling and habitual actions test used SOV or VSO word order. VSO word order is a characteristics of Russian fairy-tales because the verb at the initial position give more motion and action to the narration. [3]

Native-like(level 5)

Only one participant showed the traits of attainment of level 5. The main difference from level 4 can be described by the usage of different types of word order in the sentences: SVO, SOV, OVS. The higher number of complex sentences, subordinate clauses and infinitival or participial constructions. Vidas made no mistakes in verb agreement, case marking. There were only few mistakes with the word 'schekotat (to tickle), he was providing a form which had the right personal ending but he did not make the right phonetic changes at the junction of the stem and the personal ending:

(21) schekotat' (to tickle)

On schekotaet …. (not correct)	On schekochet (correct)
' He tickles '	' He tickles'

The tests for the comprehension/production were offered to L2 learners and to L1 native speakers.

3. Lilian studied Russian at the University of Groningen and lived in Russia for one year so she had a better immersion to the natural language environment and showed a better understanding of communicative situation and expected output.

Both native speakers easily passed the test and proved the naturalness of tasks, they correctly chosen the pictures in the comprehension test and provided expected constructions in the production test : mostly OVpl but also there were very few times when instead of OVpl one of the native speakers used OVS.

Table 8 presents the results of comprehension/Production test .

Participant	Level of IL	comprehension test			Production test	
		Female (out of 15)	Male (out of 15)	Male and female (out of 30)	OVpl (out of 15)	OVS (out of 15)
Iyad	2	8	12	20	0	0
Maria	2	10	11	21	0	0
Tim	2	10	11	21	0	0
Pierre	3	14	10	24	0	0
Stefan	3	10	12	22	0	0
Remco	4	14	15	29	0	0
Nienke	3	12	12	24	0	1
Indre	4	15	15	30	0	1
Angelina	4	14	15	29	0	0
Lilian	4	14	12	26	0	0
Vidas	5	15	15	30	0	14
Marina	native	15	15	30	15	0
Valeria	native	15	15	30	13	2

Table 8: Results of the comprehension/production test (N correct answers out of 15 possible)

Table 9 shows the results of the comprehension/production test for every type of constructions/word order.

Participant	level of IL	comprehension/listening test (30 sentences)			Production test (30 sentences)		
		SVO (out of 10)	OVS (out of 10)	OVpl (out of 10)	SVO (out of 15)	OVS* (out of 15)	OVpl* (out of 15)
Iyad	2	10	4	6	15	0	0

Maria	2	9	6	6	15	0	0
Tim	2	9	8	4	15	0	0
Pierre	3	10	8	6	15	0	0
Stefan	3	9	8	5	15	0	0
Nienke	3	10	8	6	15	0	0
Remco	4	10	9	10	15	0	0
Indre	4	10	10	10	15	1	0
Angelina	4	10	9	10	15	0	0
Lilian	4	10	7	9	15	1	0
Vidas	5	10	10	10	15	14	0
Marina	native	10	10	10	15	2	13
Valeria	native	10	10	10	15	0	0

*In Production test OVS and OVpl constructions are equally expected in for 15 pictures because it is impossible to ask the question about the picture the way that it will allow to differentiate between motivating for OVS or OVpl constructions.

Table 9: Results of the comprehension/production test for every construction.

Results of the comprehension test showed that learners are able to understand with quite a high accuracy the impersonal constructions. Participants with IL at level 2 made mistakes in OVpl constructions, they could not correctly understand which picture was described because they have not yet developed processing skills for comprehension of such constructions so their results does not show the stability in comprehension of that structures. At the level 3 participants of the test almost did not make any mistakes in understanding SVO word order but they make mistakes in comprehension of sentences with OVS word order or with OVpl constructions. At level 4 and 5 the participants process information as native speakers It means that their processing skills are developed good enough to process target constructions At the production test only 3 people used expected construction (OVS and OVpl structures). Two participants only once used OVS word order instead of SVO in spite the questions that were motivating them OVpl or OVS constructions. Only one participant with native-like level of IL development produced 14 OVS utterances and no one produced the OVpl constructions in question.

4.5 Discussion.

Before the discussion of the tests results I will reiterate my research questions and test predictions. Firstly, I wanted to profile the interlanguage development of every participant using Rapid Profile approach. I tested the participants output data for the number of processing procedures that form a processing hierarchy for L2 Russian. This allowed me to assign IL development of every participant to a corresponding level of the proposed hierarchy. Secondly, I wanted to find out how the participants with different IL level pass the test for comprehension and production of IMP constructions in Russian. My hypothesis was that for the production of IMP constructions the learners need to acquire level 4 of the proposed hierarchy of L2 Russian. I also hypothesized that the the learners at level 3 would be already able to process the IMP-constructions.

11 participants were assigned to different levels of IL (see Table 7). During the elicitation tasks no one of the participants used negation in their utterances so for accounting for the negation placement in the sentence further tests need to be done. The PT hierarchy proposed in this thesis (Chapter 2) proves to reflect the achieved level of L2 Russian for the learners with different L1. It allows to predict the ability of the learners to process and produce different types of constructions at different levels of their IL development.

For the comprehension/production tests the following conclusions can be made:

1) Participants at level 2 correctly identify most of the SVO sentences and often make mistakes in interpreting OVS or OVpl sentences. They interpret inverted word order or impersonal constructions in 50% of cases as SVO sentences and thus tend to choose reverse pictures where the object (patient) of OVS or OVpl acts as a subject (agent). This can be explained by the lack of the processing procedures for understanding case marking, verb inflection and non-canonical mapping and inverted word order. None of level 2 learners have not produced any OVS or OVpl

constructions which supports my predictions that only at a higher level of IL learners are able to correctly interpret these type of sentences.

2) Participants with level 3 are able to comprehend correctly all the SVO and 80% of OVS constructions because at this level they already start to promote some sentence constituents(like WH-words, adverbials) to the initial position and this in its turn influence the development of processing procedures for non-canonical mapping of the lexical constituents onto argument structure which is used to topicalize a particular constituent of the sentence. Comprehension of OVpl construction still develops so the learners are able to interpret correctly only 60% of the sentences. Production test showed no significant results for the IMP constructions. None of the participants produced OVS or OVpl sentences although they are able to comprehend more than 50 % of these constructions. This proves my hypothesis that the comprehension of IMP constructions precedes the production of these constructions in L2 Russian.
3) Participants with level 4 showed a considerable change in the performance in comprehension test and in production test. All the participants passed the comprehension test without mistakes and two participants once used an OVS word order. No one of them produced OVpl constructions. Thus, my hypothesis that level 4 is a prerequisite for production of IMP constructions has not been proved. It may be because I did not test a large amount of participants or may be because attainment of necessary grammatical procedures is not enough for production of IMP constructions.

   It can be explained by the lack of sufficient input with the given constructions that affects the performance and production abilities or by the need to obtain the knowledge and understanding of the pragmatics of the IMP constructions . The further research is needed to find out the reasons of poor performance of the learners with

level 4 because from grammatical point of view they have acquired all the needed procedures and are able to interpret and understand this construction.

4) One participant of level 5 passed the comprehension test with 100% performance. At the production test he produced only 14 OVS constructions for 15 "patient-related" questions. It provides strong argument against my hypothesis that level 4 is a prerequisite for production of IMP construction. Thus, the answer to the questions about what are the prerequisites for IMP production is that the level 4 is not enough for production of IMP constructions. And the answer to the question at which level of IL the learner are able to comprehend the IMP construction is that at level 4 learners are able to fully comprehend and correctly interpret IMP constructions.

To conclude, the results of the test showed at which level of IL according to PT hierarchy the learners are able to comprehend IMP constructions and also the results provide the evidence that level 4 is not sufficient for production of IMP constructions.

4.6 Conclusion.

This study has been the first attempt to investigate the acquisition of impersonal constructions with respect to the comprehension and production of this structure in L2 Russian. It was also the first attempt to build a processing hierarchy for Russian as well as the first attempt to account for grammatical and pragmatic development of one of the Slavic languages using PT theory.

The results of the study indicate that learners' ability to understand discourse-pragmatic contexts and to produce the structures that fit the context does interface with their L2 syntax development .

The empirical evidence of this study has a number of implications for further studies: the following question are to be investigated:

1) What is the frequency of the IMP constructions in L1 Russian and what motivates the speakers to use this type of construction?
2) How these constructions are presented in the teaching materials for L2 learners?
3) How the production of IMP constructions can be primed and whether the priming will lead to the earlier production of IMP constructions?

The PT theory needs to be extended further in order to be able to account for not only the procedural skills required for the comprehension and production of IMP constructions but also for the effects of frequency of the relevant input and the development of syntax-pragmatic interface at the higher levels of IL development. The current study can contribute to the future research of IMP constructions in L2 Russian and to pragmatic development of the learners of L2 Russian. The approaches used in the given study provide a structural view on the development of the syntax-pragmatic interface of L2 Russian, define the required processing skills that the learners have to obtain for comprehension and production of particular constructions and reveal new questions that are to be answered for to better understanding of the general process of Second Language Acquisition.

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