Nominal case restructuring: A case study on a Polish heritage speaker

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This research investigates incomplete acquisition and attrition in nominal case inflection in Polish heritage speakers in Canada. Incomplete acquisition found in heritage speakers occurs when there is an abrupt interruption in the input of the L1 due to lack of language contact, when the speaker becomes isolated from other speakers of the minority language, and the community language becomes the dominant language (Schmid and De Bot, 2004; Anderson, 1999). Attrition, on the other hand is observed once a grammatical aspect is fully acquired, stabilized and then lost due to an interruption in the language input. This case study followed one adult Polish heritage speaker born and raised in Canada who completed one guided production task. Results show evidence of significant language loss and a full restructuring of nominal case inflection in Polish, where the six-case system has been reconstructed to three cases with two being fully productive.

1 Introduction

Recently, a lot of attention has been given to the field of heritage speakers and heritage languages. Many studies have investigated the possibility of language loss or incomplete acquisition in this particular group of speakers, but this is just the beginning of the field in linguistics. There have been several studies done on Spanish heritage speakers (Montrul, 2002, 2004, 2005, 2006, 2008; Montrul & Bowles, 2009; Montrul, Foote & Perpiñán, 2008; among others), as well as Russian (Polinsky, 1997, 2006, 2008, 2011; among others) and Korean (Kim & Montrul, 2004; Kim et al., 2005, 2010; among others), but very little work has been done on Polish. This paper explores a case study done on a Polish heritage speaker in Canada.

Montrul (2008: 109) defines attrition as a non-pathological loss of a language property that existed and was mastered at an earlier stage, whereas incomplete acquisition occurs mainly in child bilingualism where a language property “did not reach full development and stabilized at a more simplified stage”. The phenomena of language loss and incomplete acquisition occur and tend to be found in heritage language environments where there is a minority language that is mainly spoken within the family environment (limited environment), while there is a different community language that is dominant in its everyday use (at school, work, etc.).

Because of the restricted use of the heritage language, “there are varying degrees of deterministic consequences for the complete acquisition and/or maintenance of the heritage language” (Rothman, 2007: 360); depending on whether the majority language is introduced simultaneously or successively. Rothman states that heritage speakers are a subset of bilinguals but clarifies that not all bilinguals are heritage speakers. Moreover, Valdés (2001) explains that a heritage language speaker does not need to be fluent in their language but it is expected that they do have some level of proficiency. In this work, a heritage speaker is one who was either born in their country of origin and immigrated before the age of five, or they were born in their migrant country. In both cases, the speaker grew up speaking the family language.
at home while becoming a dominant speaker of the community language. Crucially, this group of speakers has a limited vocabulary, which is closely tied to the home.

Montrul, Foote, and Perpiñán (2008) explain that the acquisition of a heritage language is both different and similar to L1 and L2 acquisition. This is because, from birth, children are taught their heritage language at home and they are exposed to naturalistic input, just like L1 learners. Most children will develop basic knowledge of the minority language, all depending on when their first exposure to the majority language is and how much exposure they receive in both languages. However, while monolingual L1 speakers receive schooling and become literate in their language, normally heritage speakers do not have access to education in their home language. Once schooling in the L2 begins, access to the L1 becomes reduced and limited in use to within the home and within a limited community, if such even exists. For children who learned their heritage language in the home, entering school is usually when the input gets interrupted or severely reduced.

Many sociolinguistic factors can contribute to attrition, such as age, length of immigration, level of education in the L1, amount of contact with the L1, amount of input available from the community, and degree of L1 and L2 use (not counting factors that deal with attitude, motivation, etc.). Montrul states that “age of onset of bilingualism” is the strongest predictive factor for attrition because the L1 needs to be acquired completely and remain stable within childhood or adolescence to be maintained at the competence level. “If the L1 grammar did not develop fully, especially in early to middle childhood, age of onset of bilingualism and extensive exposure to the L2 matter significantly for L1 attrition” (Montrul, 2008: 65). She continues to clarify that a grammar is deemed as incomplete when it fails to reach age-appropriate linguistic levels of proficiency when comparing monolinguals or fluent bilingual speakers of the same age, cognitive development, and social group.

Testing whether a grammatical structure of a language has been fully lost or incompletely acquired is not always easy to do. In order for a structure to be attrited, it has to have been fully acquired, which implies a study done with adult bilinguals. On the other hand incomplete acquisition entails an interruption in the acquisition process and thus an ideal study is longitudinal following the bilingual child over a period of time, like that of Merino (1983) who, through a longitudinal study of bilingual Chicanos, found a significant drop in performance for most children within a two-year period.

In this work, I propose to investigate the attrition of nominal case inflection in a case study looking at one adult Polish heritage speaker (‘Jacob’) living in Canada, whose Polish nominal case system has undergone a complete restructuring process from the canonical six-case system in L1 Polish to three existent cases, where only the nominative and the accusative cases are fully productive.

2 Polish morphosyntax

Polish is an Indo-European language and belongs to the Slavic branch: specifically it belongs to the West Slavic languages, which also include Czech and Slovak (Klepper-Pang, 2003). Polish has a rich inflectional system in both nominal and verbal paradigms. With the help of grammatical morphemes, the nominal paradigm is inflected for case, gender and number. As well, the verbal paradigm is inflected for person and number. Gender inflection is seen in the past tense and in the future imperfective tense (not in the future perfective). The amplitude of the inflectional system gives significant freedom to word order. Klepper-Pang (2003: 44) explains, “apart from the standard predominant SVO order, various deviations from this unmarked order are possible,” which serve the purpose of topicalization as well as focal stress.

Number is produced as singular and plural, and gender is produced as masculine, feminine and neuter. The neuter gender has a low frequency in Polish and for this reason it is not used in this study. There are seven nominal cases: nominative, accusative, genitive, dative, locative, instrumental and vocative. The vocative case is almost never used and has the same morphological endings as the nominative, and therefore does not get included in the methodology. Feldstein (2001) states that for each noun there are less than 13 forms due to cases of syncretism between the nominative and accusative cases among other exceptions. More importantly, it has been shown that inflectional morphology and nominal agreement are vulnerable to language loss (Lipski, 1993; Silva-Corvalán, 1994; Polinsky, 1997; Toribio,
2001; Montrul, 2002). Please see the Appendix for explicit examples of nouns in all three genders, which fall within each of the six productive cases found in this study.

Being aware of the complexity of the Polish case system, I expect to find that this Polish heritage speaker will have lost the majority of case agreement in nouns and will default to using the nominative and accusative cases since they are prominent in English. As well, there will be evidence of use of the masculine gender as a default gender (Hawkins, 1998; Franceschina, 2001) when there is uncertainty of the noun’s gender. Therefore, I predict that within grammatical gender, masculine nouns will have a higher accuracy rate compared to feminine nouns since in English nouns do not have a grammatical gender feature.

3 Previous studies

Very little has been done to date in bilingualism that looks at attrition or incomplete acquisition of the nominal case in Polish heritage speakers. More important work related to this topic has taken a descriptive approach, which has helped in showing that some work is being done on the said topic. There are, however previous studies that show that L1 nominal case acquisition in Polish is fully complete by the age of four. Gvozdev reports in a diary (between 1921 and 1929) on a longitudinal study performed on his son observing his L1 acquisition of case (El’konin, 1973). He concludes that the nominative is fully acquired by 2;0, followed by the instrumental (3;0), and the accusative, dative and genitive are all fully acquired by 3;6. Smoczyńska (1985) built on this study looking at ten Polish children (1;6-6;0) and found that at the age of 2;2 an initial contrast begins between the accusative and genitive and some appearance of the vocative and nominative cases emerges. By 3;0 the child learns the remainder of the elements of the declension pattern. In her study she found that there are common mistakes children will make, such as an incorrect genitive marking on the masculine singular irregular forms (instead of producing -u they produce the regular -a ending), and they will mix up the genitive with the dative (and vice versa).

Preston (1984) aimed at characterizing American Polish through the cooperative work of the State University of New York and various academic centres in Poland. Their goal was to show that the case system of American Polish operates as a system (as a whole) and not as a “depleted or altered sub-system of some standard” (Preston, 1984: 136). Through a comparison of Poland Polish with American Polish, they aimed to help characterize the overall picture of the declension used in American Polish. This study was based on data that was collected from transcripts of 17 interviews conducted among bilingual Polish-Americans in Dunkirk, New York.

With this in mind, Preston explains that Poland Polish and American Polish appear to have the same declension system, which has seven distinct cases. It is clarified that while not all 17 speakers had the same level of fluency, a clear majority used the cases unambiguously, which showed that they possess a case system that works like that of the natives. He pointed out that the instrumental case appears to have a weakened consistency but explained that it could be due to the substitution of the instrumental with the nominative case when producing predicate nominals.

Preston finds it interesting that when looking at the nouns and the cases given, those participants from Dunkirk tend to use the accusative more, those from Poznan use the genitive and those from Gliwice (another region in Poland) use the nominative. Looking at the overall picture, the nominative case is the one used most frequently. Although there are few differences between the two Poland varieties of Polish, Preston (1984: 149) is convinced that nothing is being lost by those living in Dunkirk. Instead, he explains it as a “minor re-analysis of the case system, which drops some ‘illogical’ uses and strengthens the overall system”.

Preston concludes that a comparison needs to be done between American Polish and other Polish dialects within Poland. It appears that he is unconvinced that American Polish, like its name, is influenced by English and therefore is showing a “weakening” or loss of the case system due to the overwhelming influence of the majority language.
Polinsky (1997) did a similar study looking at Russian spoken in the United States. Her research had three main goals: The first goal was to describe and define American Russian as a “reduced language” that has a significant amount of attrition. Her second goal was to test the hypothesis that “the level of attrition in morphology and syntax is correlated with the level of lexical attrition” (Polinsky, 1997: 370). She believes that the level of lexical attrition in an individual can serve as a diagnostic in establishing the overall degree of attrition. The third and last goal is her attempt to raise some “general theoretical issues related to the grammatical aspects of language loss” (Polinsky, 1997: 370). Polinsky explains that she will not be able to provide solutions to these questions but adds that it is important that they be mentioned. Furthermore, it is clarified that American Russian is “a reduced language spoken by those who abandon Russian for English and as a result demonstrate a significant loss or restructuring of their grammar” (Polinsky 1997:373). The study consisted of 20 participants.

Full Russian (that which is spoken in Russia), consists of a six-case system, which includes the nominative, accusative, dative, genitive, instrumental, and prepositional cases. Polinsky explains that American Russian shows a loss of this full six-case system and the cases that are produced by the speakers of American Russian are in fact systematic. In Full Russian, when using verbs of motion that are accompanied by predicative adjectives or predicative nominals, there is a choice to use the instrumental or the nominative case. American Russians will always produce the nominative and never the instrumental, as shown in (1) (Polinsky, 1997: 375-376):

(1) ona xočet byt’ model’ i ona budet tonk-aja dlja èto
she wants to be model.NOM and she will be thin-NOM.FEM for that.NOM
‘She wants to be a model and so she is trying to lose weight for that’

In the first clause in (1) the predicate is in the nominative after the infinitive byt’ ‘be’ and this is not possible in Full Russian. In this sentence, the instrumental case is obligatory with the infinitive ‘be’. As well, it is mentioned that when asked to translate passives from English, American Russian speakers always produce active clauses. Full Russian uses the instrumental case to produce passive sentences. Avoiding the instrumental and producing clauses in the active with the nominative case is evidence that the instrumental is no longer a case that can be used to code for a passive agent.

The genitive case has a widespread use in Full Russian. It has been found that more proficient speakers will replace the lexically governed genitive with the accusative case, and those with a lower proficiency replace it with the nominative. The use of obliques in the prepositional case is completely abandoned by those who speak American Russian. What they do instead is replace the prepositional case with the nominative. It is further explained that in Full Russian the main verbal arguments are declined with the nominative, accusative, and dative cases. Nevertheless, in American Russian only two cases are used: the nominative replaces the accusative, and the accusative replaces the dative. This means that there is no difference between how the subject and the object are marked. Polinsky clarifies that American Russian becomes a two-case language, where the nominative is a multifunctional case and the accusative becomes more specialized and is used for the indirect object and for some rare occasions to mark the direct object.

Other than attrition in the case system, Polinsky found that there is also attrition in subject-verb agreement. She states that even “the most proficient semi-speakers have about 66 per cent correct agreement,” (Polinsky, 1997:382) and that the lowest score that she noted in her study was 33 per cent correct agreement. The most common forms as a “default” are third person singular, infinitive, and first person. Example (2) shows the use of an infinitive where the third person plural should have been used. According to Polinsky there is a parallel between the loss of case declension and the loss of agreement in conjugation paradigms (Polinsky, 1997:382):

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1 ACC=accusative; DAT=dative; FEM=feminine; GEN=genitive; INF=infinitive; INST=instrumental; LOC=locative; MASC=masculine; NEUT=neuter; NOM=nominative; PARTCL=particle
Moving back to Polish heritage speakers, Cozens (2003) did a descriptive study on Polish heritage speakers at the University of Auckland in New Zealand. The objective of the study was to document the spoken language of three generations of Poles in New Zealand. Cozens cites Kouzmin (1982: 80) who describes the change in Australian migrant Russian in two stages: first they ‘forget’ and then there is grammatical change. Comparing these stages to the classroom, Cozens explains that the first-generation demonstrates the actuality of the first stage since they show a “simplification of nominal, adjectival, pronominal and verbal paradigms” (Cozens, 2003: 31). The second and third-generations show a loss or weakening of the grammatical structure and a dominance in the analytical system with frequently used phrases. She clarifies that this is not because of a loss of grammar but due to a lack of a working knowledge and use of the inflectional system. More specifically it is explained that the first-generation students at the university retain agreement in number, gender, and case. However, distinctions between masculine animate and inanimate, and between masculine personal and non-personal gender agreement are not always made. Second and third-generation speakers produce natural gender correctly but when producing adjective + noun combinations, the adjective carries the masculine singular ending regardless of the noun gender.

Most importantly it is commented that even first-generation speakers will limit the production of their case endings. Cozens explains that these speakers will have difficulty with the locative singular and the feminine dative unless they are producing phrases that are common. It can be argued that they were memorized or learned in chunks, such as in example (3a).

\[(3) \quad \text{a. Polsk-a} \quad \text{w Pols-ce} \\
\quad \text{Poland-NOM} \quad \text{in Poland-LOC} \]

\[\text{b. Łódk-a} \quad \text{w *łód-ke (łód-ce)} \\
\quad \text{boat-NOM} \quad \text{in (a) boat-LOC} \]

Example (3b) shows that because this phrase is not as common as that seen in (3a), the speaker will produce an incorrect ending, shown in bold. The part that is in parenthesis is what is the correct and expected answer, which I have provided.

Without mentioning which generation specifically shows a convergence in case, it is demonstrated that the accusative case governs the function of the genitive, instrumental and dative cases. It is however explained that second and third-generation speakers “rely on prepositional combinations with nouns which are not declined, including the use of the preposition do [‘to’], to indicate the indirect object” (Cozens, 2003:34). She cites Surus (1985) who says that when it comes to heritage speakers, tense will stay longer than aspect since aspectual use is what weakens in the early stages.

When discussing the structures of the two languages, it is found that second and third-generation speakers adopt the “structures [that are] common to both languages rather than the maintenance of two distinct, idiomatic, systems” (Cozens, 2003: 37). It is further explained that the reduction of the morphological system (as well as use of the L2 syntax not discussed here) can be taken as evidence for transfer of an entire process.

The studies mentioned above, but mainly those of Polinsky (1997) and Cozens (2003) have shown that the case systems in Russian and Polish undergo very similar changes, where the nominative and accusative cases replace the canonical six and seven case system used by native speakers. This case study looks at the nominal case system in one adult Polish heritage speaker in Canada. The objective of this study is to add to the few previous studies done on Slavic heritage languages and to be able to start to form generalizations about Slavic heritage languages such as Russian (in the United States) and Polish (in Canada) and the changes that occur to the case systems. Looking at Polinsky (1997) and Cozens (2003), it
is hypothesized that the seven-case system in L1 Polish (with six cases being fully productive) will be restructured to two cases: the nominative and the accusative. Additionally, as found in previous studies on second language acquisition (Hawkins, 1998; Franceschina, 2001) and by Cozens (2003), it is predicted that the masculine grammatical gender will be used as the default gender. Furthermore, contrary to that of Cozens (2003), the proposed changes occur not because of language transfer but instead, due to a universal simplification. In order to test the hypothesis one guided oral production task was administered to one adult Polish heritage language speaker.

3 Methodology

3.1 Subject background

The subject ‘Jacob’ was nineteen years old at the time of testing and was born in Canada. Jacob’s L1 was Polish. Jacob’s family had immigrated to Canada from Poland one year before he was born. Polish is both parents’ L1. Currently, Polish is the main language spoken in the home but Polish-English code-switching does occur regularly. Before immigrating to Canada, both parents took beginner English classes in Poland and continued to take formal evening classes once they had relocated. Jacob’s only sibling is six years older and started going to school immediately once the family had moved.

Jacob started Junior Kindergarten at age four and then began attending “Polish School” once a week (on Saturdays) as of age six, where he was taught in the Polish language about Polish grammar, literature, history, geography and culture. However, this should not be considered equivalent to formal education provided in English or what he would learn if he were raised in Poland. Unfortunately, children tend to perceive “Polish School” as a place to socialize with their friends and not to learn grammar and culture. Each Saturday consisted of four hours of in-class work. His proficiency in Polish began diminishing since the main language spoken between him and his sibling was English. As well, school, television and friends were all sources that influenced the use of English. At age nine, he spent two months in Poland with family and there his mastery of Polish strengthened. He continued to attend “Polish School” classes until he graduated from high school.

At home he code-switches between Polish and English when speaking to his parents, however he mainly focuses on speaking Polish. When speaking with his sibling, the main language used is English with some Polish borrowing. He currently rates his spoken and written fluency levels of Polish as being advanced.

Jacob was asked to fill out a Polish Proficiency Test that was established by an online company called Transparent Language. This test consists of 50 multiple-choice questions. The sections include two parts of grammar, vocabulary, and reading comprehension. At the end of the online test the student is given a score that explains their level and the correct answers are provided. Jacob is rated overall as being at the “Advanced Beginner Level”. In part one grammar he scored 46%, his mark for part two grammar is 60%, and he scored 63% in both part three vocabulary and part four reading comprehension. This gave him an overall score of 57%. Nevertheless, Jacob personally evaluated himself as being an advanced speaker of Polish, just as Cozens (2003) mentioned above that heritage speakers tend to over-rate their language abilities. This shows that he is comfortable and confident in speaking his heritage language. Ultimately, this positive attitude will reinforce his confidence and will continue to give him motivation to speak (Lightbown & Spada, 1999).

3.2 Testing

This study is based on an oral Elicited Production Task, which was used to test knowledge of nominal inflection. The task is administered orally because of the nature of heritage languages as a whole. Since heritage speakers learn their family language in the home and do not usually receive any formal education in this language, it is likely that the participant’s reading and writing capacities are limited.

The test was focused on the production of case inflections on masculine and feminine nouns. I
chose not to include neuter nouns in the task because they are the least common. The task involves a series of eight cartoon pictures and 36 questions, which elicit noun production in Polish. All 36 questions are structured in such a way that the participant is guided towards the correct use of one of the six cases available. Every question is purposely eliciting the use of one specific case, making the use of a different case ungrammatical. To reduce the amount of variables, all conditions targeted singular nouns since plural forms have different inflectional endings for all six cases and some are irregular.

Upon seeing a picture of a Smurf community doing various activities (see Fig. 1), the participant would be asked specific questions such as:

(4) a. o kim myśli
   about whom think.3SG
   ‘About whom is (he) thinking?’

b. czego nie lubi
   what no like.3SG
   ‘What does (he) not like?’

![Figure 1: Example of the Elicited Production Task](image-url)

While pointing at the Smurf holding a painting of Smurfette, question (4a) is stated by using the preposition and question word *o kim*? ‘about whom’. In this manner, question (4a) just like the rest of the questions, sets up the participant to answer by starting the response with the same preposition *o*, which is used as a guide to add the correct locative inflectional ending onto the feminine noun. The correct response to (4a) is *o smerf-ie*, using the locative -*ie* inflectional ending. Question (4b) does not use any prepositions, however, by pointing at the sleeping smurf and the book (fem. sg.) beside him, the question word *czego* ‘what’ along with the negative elicits the feminine noun with a genitive case ending. The correct response for (4b) is *książk-i* ‘books’ using the -*i* genitive inflectional ending. In order to receive such specific responses, eliciting a different case each time, a specific question must be formed. Without guiding the questions, there is no guarantee that a heritage speaker would produce any of the requested forms, especially if language loss is present.
The task is set up to elicit the same number of responses for each of the six cases. It is important to have an equal amount of responses for each case in order to be able to see whether one or two cases are used more than others. As well, there is an equal amount of nouns that require either a masculine or feminine ending. This is also an important feature because, just as with the cases, I would like to know whether there is any attrition in gender or in cases by gender, and if so, is there a default gender used, and would it be masculine like that proposed by Cozens (2003). The purpose of this task is to determine the subject’s fluency in the production of the grammatical gender in both masculine and feminine nouns and in the production of the six cases used with nouns.

An ideal case study would be conducted over a long period of time in order to track any type of change in language use and to ensure that the attriter is no longer able to produce a certain structure. With the impossibility of having a longitudinal study at the moment, this one-time test is still informative to discover Jacob’s level of language loss, focusing on grammatical gender and nominal case inflection.

4 Results

As mentioned earlier, all nouns in Polish are inflected for case, with six possibilities. As a bilingual heritage speaker, Jacob’s dominant language is English (L2), where case is only shown through the use of pronouns. His level of Polish (L1) is much weaker than that of the L2, which was evident just through a short interview before testing began. Given his sociolinguistic circumstances, this should not be a surprise. During the elicitation task, the participant made a few errors. If he corrected himself, the second response was used accurately. However, I noticed that there was one instance in the instrumental case where the first response was correct and the second ‘corrected’ response used the nominative. If Jacob did not know a vocabulary item, the experiment conductor always provided the word in the nominative case. This occurred eight times. I have chosen not to exclude the data where Jakob was provided with a vocabulary item because the nominative was the correct case two out of the eight times. This indicates that he was not being primed with the correct answer. These specific results will also be discussed and can be seen in Table 3. Table 1 shows the overall results in per cent, demonstrating how the participant responded to questions that required the use of a specific case.

<table>
<thead>
<tr>
<th>Cases</th>
<th>Tokens</th>
<th>Correct Response</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominative</td>
<td>6</td>
<td>5</td>
<td>83.3</td>
</tr>
<tr>
<td>Accusative</td>
<td>6</td>
<td>5</td>
<td>83.3</td>
</tr>
<tr>
<td>Genitive</td>
<td>6</td>
<td>2</td>
<td>33.3</td>
</tr>
<tr>
<td>Dative</td>
<td>6</td>
<td>1</td>
<td>16.6</td>
</tr>
<tr>
<td>Locative</td>
<td>6</td>
<td>1</td>
<td>16.6</td>
</tr>
<tr>
<td>Instrumental</td>
<td>6</td>
<td>5</td>
<td>83.3</td>
</tr>
</tbody>
</table>

Table 1 shows the correct response in per cent for each case elicited. This demonstrates that the participant still has a strong hold over the nominative, accusative and instrumental cases by responding correctly 83.3% of the time. However, the genitive was used correctly 33.3% of the time and the dative and locative cases were produced correctly at a rate of 16.6%. This shows that the genitive, dative, and locative cases are at a lower proficiency level than the rest.

It is very interesting to take a closer look at the participant’s incorrect responses and to see what cases were being used instead of the desired answer. Table 2 and Fig. 2 show the incorrect responses and how the participant behaved.
Table 2: Evaluation of incorrect use of case in nouns

<table>
<thead>
<tr>
<th>Expected Case</th>
<th>Nominative %</th>
<th>Accusative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominative</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Accusative</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>Genitive</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Dative</td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td>Locative</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>Instrumental</td>
<td>100</td>
<td>0</td>
</tr>
</tbody>
</table>

Figure 2: Evaluation of case substitutions in nouns

Table 2 and Fig. 2 show which cases were used when a mistake was made in the production of each case. Each time an error was made, Table 2 shows that the only two cases used as a substitution were the nominative and accusative. Specifically, the only time the participant was expected to use the nominative case and did not, he used the accusative case instead. Similarly, the only time he was expected to use the accusative and did not, he used a nominative case instead. Looking at the mistakes made in the genitive case, Jacob substituted the genitive with the nominative and accusative equally at 50% each. The dative was substituted more by the accusative with 60% and 40% for the nominative. In the same way as the accusative substitutions, for every single mistake that he made using the instrumental, the nominative case was used. The locative case is also always substituted by the nominative case. In keeping with El’konin (1973), which suggests that the instrumental case is the second case fully developed by the age of three (right after the nominative), he does produce the instrumental case correctly at 83%, just like the nominative and accusative. Still, the instrumental case is dependent on the use of prepositions, which would only be used in specific instances. Ultimately, there would be no reason to use the instrumental case as a substitution.

Jacob had a few problems remembering the vocabulary presented in the elicited production task. Each time he had trouble, the noun was given to him in the nominative case by the experimenter. It was decided to keep the data since he did not take the nouns at face value and did not reproduce them in the nominative. Table 3 shows how he dealt with items that were already provided.
Table 3 shows that out of the eight vocabulary items provided, the participant made four mistakes (in bold). Each time the noun was given to the participant in the nominative case. The two nominative items in Table 3 were produced correctly, however the participant chose to form the given noun in the diminutive (kominek ‘little chimney’). This could be because he was looking at a picture of a little home with a little chimney. The following accusative form was formed correctly, which shows that he is aware that case inflection is needed on the noun. The next accusative noun was not correctly inflected. It remained in the nominative case and this could be because it is a compound word and he was uncertain of how to treat it. The same noun comes up again in the dative case and once again, it is produced in the nominative case. Overall, it is evident that for six out of the eight times he took the nominative form and attempted to change the inflectional ending on the noun. This shows that he understands that there must be some type of modification to the noun in order to change the meaning.

The data was then analyzed looking at the errors produced to see if gender played a role. Figure 3 shows that the masculine is used more correctly when producing the nominative, genitive and instrumental cases. Conversely, feminine is used more correctly with the accusative and locative cases.

![Correct gender use with case](image)

Moreover, there was one instance where the participant chose to use lexemes along with the accusative
inflectional ending to convey his answer instead of adding canonical bound morphemes to the noun, which would be the native Polish response. This occurred when responding to a dative question:

(5) komu macha ręką
to.who wave.3SG hand
‘Who is he waving to?’

The correct response would be *smerf-owi* ‘to the smurf’, applying the dative inflectional ending on the noun. However, Jacob responded with a literal English translation with *do smerf-a* ‘to the smurf’, adding a preposition (as in English) and an accusative ending on the noun, as found in Cozens (2003).

5 Discussion and conclusion

This study examined attrition in a second-generation Polish heritage speaker within the context of nominal case inflection and grammatical gender. The initial aim of this study was to see if nominal case attrition and incomplete acquisition are present. The results from this study suggest that second-generation Polish heritage speakers tend to lose some aspects of the native grammar. Additionally, grammatical gender errors are also present in the grammar of the heritage speaker. These errors produced are due to language loss of grammatical gender and attrition and incomplete acquisition of case inflections on the noun. It appears that the case system has not completely deteriorated, but instead it has undergone a restructuring process where three cases (nominative, accusative, and instrumental) out of six are still present but only the nominative and the accusative remain fully productive.

An error analysis done on case production has shown that case replacement is systematic, where the canonical form of each case is replaced by either the nominative or accusative cases. Every instance of the locative and instrumental was replaced with the nominative. When the accusative was expected but not used, it was also replaced with the nominative. In the one instance that the nominative was expected but not used, it was replaced with the accusative. The genitive and dative cases were replaced by both the nominative and accusative cases, which is evidence that he is unsure of which case to use. Franks (1995:202) explains that in the formation of the genitive of negation within this construction, “Polish applies obligatorily the complements of verbs that would be accusative in affirmative sentences”. In other words, the affirmative utterance takes the accusative inflection while the negative takes the genitive inflection. These data show that although all questions elicited instances of the genitive case in the negative, the accusative case as a replacement was used 50% of the time, which is not enough to conclude that the subject knew that the affirmative version of the sentences take the accusative case inflectional forms.

This study confirms the work of Smoczyńska (1985), where there is a low production rate in the correct use of the genitive and dative cases. Smoczyńska found that children tend to mix up the two cases, which may mean that it takes children longer to fully develop the genitive and dative cases. With that being said, it is very possible that those two cases were never fully developed in Jacob’s internal grammar when he came into contact with English at the age of four. This would imply that part of the nominal case system suffers from incomplete acquisition because it was never fully stabilized. Meanwhile, the other part of the case system (the nominative, accusative, locative, and instrumental cases) suffers from attrition since these cases would have been fully developed and stable by the age of three and currently at the age of 19 Jakob display signs of attrition. In order to confirm that the changes observed have indeed occurred because of a universal simplification and not due to influence or transfer from English, more testing needs to be done between other language groups that do not include English as the dominant language.

Results comparing the use of nominal case by grammatical gender were inconclusive. The analysis showed that gender had little effect on the correct usage of nominal case. There is a slight tendency towards the use of the masculine gender as in the nominative, genitive and instrumental cases. However, the feminine gender is used more with the accusative. In the correct production of the genitive case, Jacob only used the masculine gender. However, the dative case shows an equal use of both genders. These
results demonstrate that attrition is present in grammatical gender, but testing of more participants needs to be done in order to check for a systematic preference for the masculine grammatical gender as the default gender, as reported in previous studies specifically Cozens (2003). I suspect that this is due to the irregularity of the case and the amount of possible inflectional endings on the noun. As mentioned earlier, this deals with Seliger’s redundancy reduction principle and the fact that in Polish, case inflections on nouns are more marked than in English.

The results discussed are indeed intriguing and follow patterns found in past studies (Smoczyńska 1985, Polinsky 1997, Cozens 2003), but more work still needs to be done with more participants and perhaps a comprehension task. As previously mentioned, not all heritage speakers are literate in their heritage language, which limits the possibilities for adequate testing. Despite the limitations of this study, results point towards a syntactic reconstruction at the nominal case level moving away from six cases to only two fully productive cases, supporting that found in Polinsky’s (1997) American Russian participants.

References


(Doctoral Dissertation). University of Stuttgart, Stuttgart, Germany.
Appendix A: Examples of nouns in each gender and case

(1) Nominative
Masculine: a. ten dom-Ø jest ładny
this house-MASC is nice
Feminine: b. ta książk-ą jest krótką
this book-FEM is short
Neuter: c. te drzew-o jest wysokie
this tree-NEUT is tall

(2) Accusative
Masculine: a. ja mam ładny dom-Ø
I have (a) nice house-MASC
Feminine: c. ja mam ciekawą książkę
I have (an) interesting book-FEM
Neuter: d. ja mam wysokie drzew-o
I have (a) tall tree-NEUT

(3) Genitive
Masculine: a. to jest wejście mojego dom-u
this is entrance my house-MASC
‘This is my home’s entrance’
Feminine: b. ja nie mam nowej książki
I no have new book-FEM
‘I don’t have a new book’
Neuter: c. ja chcę trochę drzew-a
I want (a) bit wood-NEUT
‘I want a bit of wood’

(4) Dative
Masculine: a. ja kupilem nową farbe dom-ów
I bought new paint house-MASC
‘I bought new paint for the house’
Feminine: b. wszystko co ja wiem to dzięki książce
everything what I know PARTCL thanks book-FEM
‘Everything that I know is thanks to the book’
Neuter: c. on uszkodził drzew-u kożnię
he hurt tree-NEUT roots
‘He hurt the tree’s roots’

(5) Locative
Masculine: a. on jest teraz w dom-u
he is now in home-MASC
‘He is now at home’
Feminine: b. okulary leżą przy książce
glasses laying by book-FEM
‘The glasses are laying by the book’
<table>
<thead>
<tr>
<th>Case</th>
<th>Example 1</th>
<th>Example 2</th>
<th>Example 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neuter:</td>
<td>c. Ania zostawiła czapke na drzew-ie</td>
<td>Annie left hat on tree-NEUT</td>
<td>‘Annie left her/a hat on the tree’</td>
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<td>(6) Instrumental Masculine: a. ona widziała sarne za dom-em</td>
<td>she saw deer behind house-MASC</td>
<td>‘She saw a deer behind the house’</td>
</tr>
<tr>
<td>Feminine:</td>
<td>b. on zabił muche książ-ką</td>
<td>he killed fly book-FEM</td>
<td>‘He killed a fly with a book’</td>
</tr>
<tr>
<td>Neuter:</td>
<td>c. my wracamy z drzew-em</td>
<td>we come.back with wood-NEUT</td>
<td>‘We are coming back with wood’</td>
</tr>
</tbody>
</table>