

Birth Language Attrition and Reacquisition in Russian Adoptees

Avram J. Lyon

The wave of adoption from Russia and other countries of the former Soviet Union has brought a large number of incomplete Russian speakers into the United States; over 71,000 orphans from Russia, Ukraine, Kazakhstan, and Belarus have been issued United States entry visas since 1992 (U.S. Department of State 2007 and 2009; Ruggiero 2007). This is part of a larger trend toward international adoption, amounting to several hundred thousand children in the past decades. Children adopted by American families experience a radical reduction in birth language exposure and must quickly acclimate to and become proficient in the language of the adoptive family.¹ This is a uniquely widespread and easily accessible instance of L1 attrition, and a special case of language acquisition; as such, international adoption has seen quite a rich treatment in linguistics literature. The present study considers questions of L1 re-acquisition, and attempts to contextualize this phenomenon within both the international adoption literature and the incomplete language acquisition or heritage language literature.² On the basis of a small case study and the learning outcomes of adopted children at a summer language camp, I point to importance of internationally adopted children as a resource for understanding heritage language, and to their potential role in Russian language programs as heritage-like learners.

Birth language attrition is real and striking. Gindis (1999, in Glennen 2002a) found that Russian children adopted between the ages of four and eight lost functional use of the language within a year, a finding supported by my

¹ Here it is tempting to refer to the birth language as L1 and the adoptive language as L2, but adopted children vary widely enough in their proficiency in the birth and adoptive languages to render the ordering implied by such tags merely chronological. I continue to use L1 in reference when appealing to established theory and literature in L1 attrition, but in many cases the term is disingenuous when dealing with internationally adopted children.

² For a discussion of incomplete acquisition and uninterrupted acquisition in Russian, see Polinsky (2007) and works cited therein. As internationally adopted children are not generally part of an émigré community, I have tried to use the terms *heritage speaker*, *heritage learner*, and *heritage language* exclusively when referring to persons directly involved in such a community, and to employ the term *incomplete acquisition* to encompass the wider phenomenon.

personal observations of recent adoptees.³ Unfortunately, the lack of birth language input that triggers this remarkable attrition makes it difficult to quantify the factors influencing it, as there are generally no speakers of the birth language in the adoptive home. Anecdotally, Glennen and Masters (2002) note that even in an adoptive home where one parent was an L1 native speaker of the birth language, the family reported no birth language production within a year of adoption. Two studies on adults (22-36 years) adopted from Korea as children (3-9 years) demonstrated that adoptees can become deattuned to Korean-specific phonemes (Ventureyra, Pallier & Yoo 2004), and show brain activation consistent with non-adopted speakers of the adoptive language (Pallier et al. 2003).

It is commonly believed in second language acquisition that learners cannot reach some aspects of native speaker speech after a certain age, an intuition formalized in part by the *critical period hypothesis*, which posits “after the age of ten or twelve, the general functional connections have been established and fixed in the speech cortex” (Lenneberg 1967, in Ventureyra et al. 2004). The exact formulation varies (the cut-off age has been placed as low as six) and the hypothesis has been subject to criticism for lacking falsifiability (Flege 1987) and being confounded with education in the L2 (Flege 1999), but there is general support for the underlying idea that language learning capacity reduces with age. Ventureyra et al. (2004) propose that, in the absence of L1 input, the neural network may show more plasticity than usual and be reset, enabling children adopted even at nine or ten to fully acquire their adoptive language.

In the case of infant and toddler adoption, the totality of both birth language loss and adoptive language acquisition are essentially undisputed. A study on a cohort of children adopted from Eastern Europe at 11-23 months shows that the acclimation process may introduce a delay in the formation of L1-appropriate morphology (Glennen, Rosinsky-Grunhut & Tracy 2005), but most such adoptees eventually develop proficiency in the adoptive language comparable to that of their non-adopted peers (Price, Pollock & Oller 2006). That said, there are numerous language and psychological concerns that cloud the question of adoptive language acquisition, including an increased risk of auditory processing disorders (McCarthy 2005) and social, attention, and aggression problems (Groza 1999). In a study that partly contradicts Price et al. (2006), the lowest performers in a group of 55 adoptees from China failed to

³ The author works in a Russian-language summer program, which attracts many heritage learners and adoptees from Russian-speaking countries. The programs teach Russian through culturally authentic immersion. It is not yet clear what particular effect, if any, this approach may have with adoptees. This question is in need of further exploration.

catch up with their peers in the cohort even after two more years of English exposure (Roberts, Pollock & Krakow 2005). A follow-up study on 48 Eastern European adoptees, now school-aged, found that internationally adopted students “may have subtle deficits in use of higher-level pragmatic language” (Glennen and Bright 2005).⁴ Such deficits, however, do not shift adoptees’ mean performance out of the normal range. For a more nuanced discussion of adoptive language acquisition and related developmental concerns, see Glennen (2002a) and Welsh *et al.* (2007).

In what cases, then, can the pre-adoptive language be preserved? The operative question, perhaps, is what would happen in an adoptive environment not completely starved of pre-adoptive language input. Ventureyra *et al.* (2004) propose comparing immigrants who moved at the same age as a given cohort of international adoptees, comparing pre-immigration (L1) and pre-adoptive (birth) language performance on a number of metrics. While the investigators conceived of the test to evaluate the neural plasticity underlying language acquisition—and ultimately the critical period hypothesis—they make a critical connection between the linguistic experience of heritage speakers and internationally adopted speakers. Unfortunately, this connection has not been sufficiently explored.

One particularity of international adoption is that it is not limited to infants and toddlers. A survey conducted by the Eastern European Adoption Coalition found that 16.7% of respondents’ adopted children had been adopted at age seven or older ($N=293$)⁵. In Russia, Ukraine, Belarus, and Kazakhstan, which together account for 76.4% of these adoptions ($N=293$), children begin going to school at age seven (McCarthy 2005). It is tempting to label these speakers after Kagan (2005), who categorizes heritage Russian learners by the quantity and quality of their experience with Russian. She proposes four categories of learners: those who completed high school before emigration; those who completed most but not all of their primary and secondary education in a Russian-speaking country; those who emigrated during elementary school; and those who had no

⁴ The authors also raise concerns that survey instruments used in evaluating these and other adoptees may be flawed, as some language assessments are confounded by independent correlations between certain language impairments and ADD/ADHD, a diagnosis more common among internationally adopted children (Glennen and Bright 2005).

⁵ The Eastern European Adoption Coalition conducted the survey through a publicly-accessible web form, and advertised the survey among its members. The Coalition and the present work do not presume that the survey is representative of international adoption in general. The 293 responses account for less than 0.4% of adoptions from Eastern Europe from 1990 to 2005 (U.S. Department of State 2009). Unfortunately, other data are not available.

experience with Russian-language schooling. With the presence of L1 reinforcement after emigration, speakers in the first two categories come to use an acrolect⁶ of their baseline (pre-emigration) language, while those in the latter two come to use a basilect of the same (Polinsky and Kagan 2007). This research and analogous work with other languages, however, is predicated upon incomplete severance from the L1. In the case of international adoption, the first category is understandably absent, and the latter three seem to develop differently, as previously mentioned with regard to children adopted from Korea at 3-9 years, and subsequently exposed to Korean in adulthood (Pallier et al. 2003; Ventureyra et al. 2004).

In both the heritage literature and in the adoption literature, work with interrupted language acquisition and re-acquisition has concentrated on university age and older students (*Korean* Ventureyra et al. 2004; *Spanish* Au et al. 2001; *Russian* Kagan and Dillon 2001). While there are often Spanish programs at the elementary and middle school levels that often deal with heritage and adopted learners, other common birth languages such as Chinese, Russian, and Korean are less often taught at the pre-university level. As a result, it may be that birth language retention or reacquisition must be evaluated earlier than young adulthood, leading to the perhaps premature conclusions of Pallier et al. (2003) and Ventureyra et al. (2004).

The predominant focus of international adoption literature is on infant and toddler adoption and their acquisition of the adoptive language. This prioritization, while quite understandable given the pressing developmental concerns involved, has relegated the fate of the birth language to occasional passing mentions. For children adopted as late as nine years, the end state (by early adulthood) for adopted children has been shown to be complete language loss (Pallier et al. 2003; Ventureyra et al. 2004), but the mechanisms of attrition are not understood. One significant exception is Isurin (2000), which presents a two-year longitudinal study of a single girl adopted at age nine from Russia and traces her L1 and L2 proficiencies starting one month after L1 interruption (adoption). The study showed almost complete replacement of Russian by English by the end of the study period, supported strongly by decreasing accuracy and response times in picture identification tasks.

⁶ Here, the terms basilect and acrolect are used as described in Polinsky and Kagan (2007) and correspond to basic interpersonal communicative skills (BICS) and cognitive academic language proficiency (CALP), respectively, as they used in the second language acquisition literature. Note also that the baseline for adoptees is not Full Russian (Polinsky and Kagan 2007), but rather what was spoken in the orphanage and possibly birth family.

Additionally, investigators have not considered the oldest adoptees, who leave their birth countries as preteens (11-13 years), and who account for roughly four percent of adoptees from Russian-speaking countries (McCarthy 2005). There has apparently been no research investigating the processes of birth language attrition in older adoptees. As the central distinction between heritage and adoptee language is the presence or absence of continued birth language input; such research would take the form of a longitudinal study of cohorts of immigrant and adopted children, matched for age at departure.

While it has not yet been possible to engage in the longitudinal study proposed above, I can personally attest to the preservation of Russian in late adoptees. While working at a program teaching Russian to children ages seven to eighteen, I have encountered a great many children who have opted to relearn or retain their birth language through the program. While my experience with infant and toddler adoptees corroborates the findings of other researchers, the program also sees children with essentially intact language skills. Generally, the program's first interaction with these children was within a few months to two years after adoption. As my work with these children was as a teacher, not as a researcher, I cannot at this time provide detailed analysis of their speech. In the following, I present a basic analysis of two such children's writing and describe parallels with heritage language as described by other researchers.

Both children were approximately thirteen years old and had been adopted from orphanages in Russian-speaking countries. The children's adoptive homes were wholly English-speaking, although Child B had had continued contact with Russian-speaking friends. Child A was adopted more than five years ago and had previously attended the summer camp, while Child B had been adopted within the previous three years and had not yet attended the camp. Both children are presumed to have spoken age-appropriate Russian at adoption and can thus be seen as language forgetters, rather than incomplete learners (Polinsky 2007).⁷ While we did not formally evaluate their English proficiency, both children spoke notably weaker English than their peers.

Both adoptees were campers in the two-week program, and they had both been

⁷ If we examined these children's speech at adulthood, we might consider them incomplete learners, as they did not have a chance to learn some aspects of mature Russian while in the birth language environment. Here, however, we approach their language with regard to the baseline of children's Russian.

placed in the heritage learning group⁸ on the basis of an informal oral and written proficiency interview. Their Russian proficiency, while clearly limited, was incomparably better than that of other campers who had attended the camp for the same number of summers.

The children's class watched an episode of *Cheburashka*, a very well-known children's cartoon from the late Soviet period, and the children were then asked to write an account of what happened in the cartoon. Both of the research subjects had previously seen this and other episodes of the cartoon. Typed copies of the children's handwritten responses are found in the Appendix.

It is clear that additional time speaking Russian before adoption and less time in the Russian-limited post-adoption environment significantly helped Child B, who demonstrates a much broader vocabulary and better narrative control. In contrast, Child A struggled to use concrete identifiers, instead falling back on 'this man,' 'these tickets,' and 'this woman.' This tendency points to weaker in-language recall. While both stories are understandable, the children speak and write using a simplified and non-normative grammar.

Drawing from Polinsky's study of Russian heritage speakers' speech (2007), I scored these texts in six categories: subject-verb agreement, choice of nominative versus instrumental case for predicate nominals, use of resumptive pronouns within a clause, declension in preposition-governed obliques, clear cases of English interference, and spelling. These data and a limited comparison to Polinsky's results appear below.

⁸ While it is out of the scope of this piece to explain the teaching methodologies employed, the heritage classes are modeled after the "macro" approaches explained in Kagan and Dillon (2001) and embodied in the textbook *Russian for Russians* (Kagan, Akishina, and Robin 2002), with accommodation made for campers' interests and age.

	Child A	Child B	American Russian ⁹
Subject-verb agreement	100% correct (11 items)	90% correct (29 items)	52% (SD 22)
Predicate nominal	0% correct (1 item)	100% correct (1 item)	Nominative only
Resumptive pronoun	4 instances	0 instances	18% (SD 8.8)
Preposition obliques	33% correct (3 items)	58% correct (12 items)	13% (SD 10)
English interference	0 instances	2 instances ¹⁰	Not assessed
Spelling	66% correct	92% correct	Oral
Composition length	73 words	176 words	Not applicable

These children, despite being largely starved for Russian-language input, demonstrate birth language preservation far stronger than that seen in speakers of the American Russian basilect.¹¹ Subject-verb agreement, for example, is preserved essentially completely, as long as five years after adoption. Even their use of preposition-governed phrases easily surpassed the low-level heritage group. Note, however, that the heritage Russian speakers studied by Polinsky were chosen explicitly in order to study the structure of highly attrited Russian. Unfortunately, analogous analyses of the speech and writing of less profoundly attrited language are apparently lacking. Nonetheless, the children's less extreme attrition exhibits some structural similarity to incomplete acquisition as seen in heritage speakers.

Under incomplete acquisition, Russian exhibits major and largely predictable grammatical shifts, particularly simplification of the case system, loss of some or all verb forms, loss of verbal aspect, and a simplified and more redundant syntactic system of pronoun usage (Polinsky 2007). In American Russian, as this basilectal form is termed, the predicate nominal is used exclusively with the nominative, while in Full Russian, the instrumental is

⁹ Polinsky (2007) presents these data collected from twenty heritage Russian speakers, based on fifty tokens of speech. While she does not provide detailed demographic information, they were adults who had left Russia as children or were born in the United States (incomplete learners) or who had grown up in Russia, but had since lived in the United States for a long time (forgetters).

¹⁰ This measure is arguably subjective; I did not count confusing Russian and English letters, a problem is endemic to Child A's piece (э vs. e) and which occurs twice in Child B's piece (и vs. y). These orthographic mix-ups are included in the spelling score. The two instances I observed were an English possessive written in Cyrillic (Геня́з = Genya's) and the Russian фокус (trick, n.) used as if it were a verb, certainly due to the influence of English, where "trick" is both a noun and a verb.

¹¹ This treatment of emigrant and heritage Russian considers speakers within the frameworks established for Creole studies and has been developed in recent works by Polinsky and Kagan (2007; Polinsky 2007). In the following discussion, Full Russian is the Creole's assumed baseline (with some caveats) and American Russian is the derived basilect spoken by the low-level heritage Russian speakers studied by Polinsky (2007).

required in some cases and used not rarely in others. The children differed in their use of the predicate nominal:

Child A:

они видели	дети	они были	грязные.
<i>oni vidjeli</i>	<i>djeti</i>	<i>oni byli</i>	<i>graznije.</i>
they saw	children.NOM	they were.PAST.PL	dirty.NOM.PL
'they saw children who were dirty'			

Child B:

Крокодил	спросил	ним	почему
<i>Krakodil</i>	<i>sprosil</i>	<i>nim</i>	<i>počemu</i>
Crocodile	asked	them.DAT.PL	why
они были	грязным.		
<i>oni byli</i>	<i>graznym.</i>		
they were.PAST.PL	dirty.INST.SG		
'Crocodile asked them why they were dirty'			

Both treatments of the predicate nominal are acceptable in Full Russian, and so it is remarkable that Child B chose the more conservative instrumental case; this may be due to the implicit formality of written work. The child's use of a singular instead of a plural form of the adjective could be a spelling error (one omitted letter) or evidence of a fixed frozen form. Later in the composition, Child B uses a similar predicate nominal with the nominative ('Мальчики были разные после этого.'), so the child is at least unsure.

The general tendency towards simpler and more consistent noun forms described for American Russian is evident. Child A's composition, while it showed greater accuracy in preposition use than all but one of the speakers in Polinsky's study, employs only three prepositional phrases, apart from the possessive construction '*u* PRONOUN.GEN *est*,' which is no longer a preposition-governed oblique, but rather a frozen adjectival phrase (Polinsky 2007). The absence of complex prepositional phrases, and thus of the degenerate form described for American Russian, may point to more severe attrition.

Child B exhibits a less extremely simplified case system, characterized by a pattern of overgeneralization.

Child B:

Они бегалу ¹²	друг за	друга.
<i>Oni bjegali</i>	<i>drug za</i>	<i>druga.</i>

¹² I presume here that Child B intended to write 'и' and accidentally used the English letter 'y.'

They ran.PAST.PL one after one.GEN.

'They ran one after the other.'

Here, the preposition 'za' requires the instrumental case, but the phrase '*drug za druga*' (one another), using the genitive case, is quite common as well. Rather than maintain both forms of the phrase, one form may have become the sole variant. In the following sentence, however, the child correctly uses the preposition 'za':

Child B:

Потом	поезд	пошел	и	Шапокляк	за	ним.
<i>Potom</i>	<i>pojezd</i>	<i>poshol</i>	<i>i</i>	<i>Šapoklyak</i>	<i>za</i>	<i>nim.</i>
Then	train	went.PAST	and	Shapoklyak	after	it.INST.

'Then the train went and Shapoklyak went after it.'

In this case, however, the correct use of 'za PRONOUN.INS' may also be a frozen phrase; indeed, the child's sentence reads like a line from a fairy tale, and it is not clear that the child would produce the analogous form without a pronoun (e.g., '*za pojezdom*' 'after the train'). This case-by-case approach to deviation is, however, purely speculative. Without larger datasets and more rigorous methodology, it would be premature to conclude that the preceding errors amount to a simplified grammar, as shown for American Russian, rather than sporadic and unpredictable events.

A more convincing structural change is the use of American Russian's pronoun system. As Polinsky (2007) describes, speakers heavily overmark, as seen in Child A's resumptive pronoun usage. Neither child employs the reflexive pronouns (reflexive anaphors), instead using personal pronouns:

Child A:

и	потом	они забыли	их	вещи
<i>i</i>	<i>potom</i>	<i>oni zabyli</i>	<i>ix</i>	<i>vješi</i>
and	then	they forgot.PAST.PL	their	things

'and then they forgot their* things' (*unspecified third person's)

This shift in favor of explicit and perhaps redundant pronouns is seen in Child B's work as well:

Child B:

Чебурашка	и	Геня	были на	поезде	и
<i>Čeburaška</i>	<i>i</i>	<i>Genja</i>	<i>bylje na</i>	<i>pojezdje</i>	<i>i</i>
Cheburashka	and	Gena	were on	train.PREP	and
они	полажили		билеты		
<i>oni</i>	<i>polažili</i>		<i>biljety</i>		
they	put_down.PAST.PL		tickets		

'Cheburashka and Gena were on a train and they put down tickets.'
Here, the pronoun '*oni*' (they) in the second clause is extraneous, a deviation typical of American Russian (Polinsky 2007). Note also that this sentence lacks the reflexive pronoun '*svoi*' that Full Russian might prefer.

While these preliminary results do not completely agree with previous characterizations of attrited Russian, they demand some explanation and further research. It is not clear to what degree the specifics of adoptee Russian identified in this study depend on the age at adoption and the child's post-adoptive language exposure. Future research must include more children with better understood backgrounds, and elicit speech and writing with the explicit goal of answering *a priori* research questions. One weakness of the present study is that it has no appropriate control groups. While there are parallels to be drawn between the language of adult forgetters and incomplete learners and internationally adopted children, their formative language experiences differ too widely to draw meaningful conclusions about the nature and cause of attrition. Analogous data for young heritage learners of Russian are very limited. The present case study's limited analysis of adoptee language highlights how poorly we understand the character of early birth language attrition, not only in adoptees, but also in immigrants.

From the point of view of linguistics and language acquisition research, internationally adopted children can provide insight into the effects of complete birth language starvation. Research on the birth language of such children can complete the picture of interrupted language acquisition, a picture previously limited to incompletely interrupted acquisition (heritage language). Further work with adoption would provide new opportunities to investigate the processes of language loss, retention, and reacquisition in both cases of interrupted acquisition, starting from the very point of interruption.

The phenomenon of birth language attrition is not wholly linguistic in nature, and the psychological effects of adoption may play a large role in the rapid loss observed by previous investigators. Groza (1999) notes that childhood institutionalization of any sort can impede development in general, and Glennen (2002b) observed that Russian and Eastern European orphanages provide very limited language input, which certainly could lead to non-age-appropriate acquisition of the birth language. Children in a Russian orphanage were found to lack expressive language at 2-1/2 years, with little improvement by 3-1/2 years (Dubrovina 1991, in Hough 2005). Thus, it is important to consider the nature of the pre-adoptive baseline language; it may differ significantly from that of child immigrants or Russian children.

Anecdotally, I have seen evidence, as a teacher, of emotional and psychological factors. A preteen Russian adoptee once commented to me on her language interests, saying: "I don't want to remember Russian. I want to learn Russian." Such sentiments might attest to a psychological block, enacted to cleanly demarcate the child's past of neglect from the more positive present, in the process making the child's Russian knowledge inaccessible, as suggested by Gindis (2005). Another child, while the class was learning words for animals, spontaneously came up with and called out animals not taught in class, and which he could not later reproduce or translate. These and other surprising moments point to a very complex underlying phenomenon. While the psychological specifics may at times obscure the linguistic mechanisms at play, the structure of attrition and reacquisition should provide insight into the structure of the language acquisition device. Perhaps most importantly, the heightened emotional complexity of the adoptee language situation should not serve to dissuade educators and researchers from actively pursuing this fascinating and not uncommon phenomenon.

The present work does not consider the pedagogical implications for work with internationally adopted children, but I hope that the parallels with heritage language will prove strong enough to help teachers use the growing body of materials for heritage language learners with these children.

Finally, I hope that these children will unlock their birth heritage; adoptive parents and adopted children alike show genuine interest in maintaining cultural and linguistics connections with the birth country and language (cf. Hummel 2005 for parent motivation and Mandarin Chinese). Many internationally adopted children struggle with language, emotional, and psychological concerns (Mason and Narad 2005; McCarthy 2005), and the success they have with Russian can make children feel great pride. In my work with these children and their parents, I have found that learning Russian helps children understand that they have something special that their non-adopted peers do not. It remains only to explore the nature of internationally adopted children's language, so that it can be maintained and enriched effectively.

Appendix

Child A

Чубурашка и крокадил гена они пашли на поест кудата. И кагда они пашли на поест етат мушина спрасил если уних есть билеты. Они сказали ети билеты были на

стале. И потом эта жаншина сказала у ниё есть билеты потомушта ана забрала эти билеты. И потом кагда чубурашка и крокодил гена они ходили у них были чемадани и потом ани забыли их вещи. И потом кагда они ходили они видели дети они были гразние.

Child B

Вчера мы смотрели мультфильм об Чебурашке, Гене, и Старуха Шапокляк, Лариска и туристы. Чебурашка и Геня быле на поезде и они положили билеты, и Геняз денгу под окошке. А Шапокляк украла билеты и деньги с окошка. Когда контролёл пришол посмотреть на билеты Чебурашка увидил что их билеты же небыле куда они положили их. И потом ним надо было выходить с поезда. Когда они выхоли Чебурашка увидел Шапокляк.

И он сказал Гене что Шапокляк украла его билеты. Они бегалу друг за друга. Потом поезд пошол и Шапокляк за ним. Чебурашка пошли домой на ногами. И Геня устал. Потом они сидели и Чебурашка увидел туриста. Потом же они увидели Шапокляк фокус турист. Потом Шапокляк убегла. Когда Геня и Чебурашка ходили они увидили два мальчика. Кракодил спросил ним почему они были гразным. Они ответели потомушто “factory was polutting” речку. Геня погаварил с дирестом чтобы они не загрязывали ту рику. Мальчики были разные после этого.

После этого Шапокляк заставила туристов отдать всё что она забрала.

В конце Шапокляк, Чебурашка и Крокодил Геня ехали на верху поезде и пели песни.

Конец.

Works Cited

- Au, T.K-f., L.M. Knightly, S-A. Jun, J.S. Oh. “Overhearing a language during childhood.” *Psychological Science* 13.3 (2001): 238-43.
- Dubrovina, I. (ed.) *Psychological Development of Orphanage Wards (Psixicheskoje razvitije vospitannikov detskogo doma)*. Moscow: Prosveschenije, 1991.

- Flege, J.E. "A critical period in learning to pronounce foreign languages?" *Applied Linguistics* 8.2 (1987): 162-177.
- Flege, J.E., G.H. Yeni-Komshian, S. Liu. "Age constraints on second-language acquisition." *Journal of Memory and Language* 41 (1999): 78-104.
- Gindis, B. "Language-related issues for international adoptees and adoptive families." In T. Tepper, L. Hannon, and D. Sandstrom (Eds.), *International adoption: Challenges and Opportunities* (pp. 98-107). Meadowlands, PA: First Edition, 1999.
- Gindis, B. "Cognitive, language, and educational issues of children adopted from overseas orphanages." *Journal of Cognitive Education and Psychology* 4.3 (2005): 291-315.
- Glennen, S. "Language development and delay in internationally adopted infants and toddlers: a review." *American Journal of Speech-Language Pathology* (2002a): 333-339.
- Glennen, S. "Orphanage care and language." *Language Development in Internationally Adopted Children* (2002b)
<http://pages.towson.edu/sglennen/OrphanageCareandLanguage.htm>
 Accessed June 27, 2008.
- Glennen, S., B. Bright. "Five years later: language in school-age internationally adopted children." *Seminars in Speech and Language*. 26.1 (2005): 86-101.
- Glennen, S., M.G. Masters. "Typical and atypical language development in infants and toddlers adopted from Eastern Europe." *American Journal of Speech-Language Pathology*. 11(2002): 417-433.
- Glennen, S., A. Rosinsky-Grunhut, R. Tracy. "Linguistic interference between L1 and L2 in internationally adopted children." *Seminars in Speech and Language*. 26.1 (2005): 64-75.
- Groza, V. "Institutionalization, behavior, and international adoption." *Journal of Immigrant Health*. 1.3 (1999): 133-143.
- Hough, S. *Language Outcomes in School-Age Children Adopted from Eastern European Orphanages*. Unpublished doctoral dissertation, University of Pittsburgh, 2005.
- Isurin, L. "Deserted island or a child's first language forgetting." *Bilingualism: Language and Cognition*. 3.2 (2000): 151-166.
- Kagan, O. "In support of a proficiency-based definition of heritage language learners: the case of Russian." *The International Journal of Bilingual Education and Bilingualism*. 8.2-3 (2005): 213-221.
- Kagan, O., T. Akishina, R. Robin. *Russian for Russians*. Bloomington, IN: Slavica, 2002.

- Kagan, O., K. Dillon. "A new perspective on teaching Russian: focus on the heritage learner." *Slavic and East European Journal*. 45.3 (2001): 507-518.
- Lenneberg, E. *The Biological Foundations of Language*. New York: Wiley, 1967.
- Mason, P. and C. Narad. "International adoption: a health and developmental perspective." *Seminars in Speech and Language*. 26.1 (2005): 1-9.
- McCarthy, H. "Survey of children adopted from Eastern Europe." Eastern European Adoption Coalition, 2005.
http://www.eadopt.org/index.php?option=com_content&task=view&id=48&Itemid=57 Accessed Dec 10, 2007.
- Montrul, S., K. Potowski. "Command of gender agreement in school-age Spanish-English bilingual children." *International Journal of Bilingualism*. 11.3 (2007): 301-328.
- Pallier, C., S. Dehaene, J.-B. Poline, D. LeBihan, A.-M. Argenti, E. Dupoux, J. Mehler. "Brain imaging of language plasticity in adopted adults: can a second language replace the first?" *Cerebral Cortex* 13 (2005): 155-161.
- Polinsky, M. "Reaching the end point and stopping midway: different scenarios in the acquisition of Russian." *Russian Linguistics*. 31(2007): 157-199.
- Polinsky, M., O. Kagan. "Heritage languages: in the 'wild' and in the classroom." *Language and Linguistics Compass*. 1.5 (2007): 368-395.
- Price, J.R., K.E. Pollock, D.K. Oller. "Speech and language development in six infants adopted from China." *Journal of Multilingual Communication Disorders*. 4.2 (2006): 102-127.
- Ruggiero, J.A. *Eastern European Adoption: Policies, Practice, and Strategies for Change*. New Brunswick: Transaction, 2007.
- United States Department of State, Bureau of Consular Affairs. 'Immigrant visas issued to orphans coming to the U.S.', 2009.
http://travel.state.gov/family/adoption/stats/stats_451.html Accessed May 1, 2009.
- Ventureyra, V.A.G., C. Pallier, H.-Y. Yoo. "The loss of first language phonetic perception in adopted Koreans." *Journal of Neurolinguistics* 17 (2004): 79-91.
- Welsh, J.A., A.G. Viana, S.A. Petrill, M.D. Mathias. "Interventions for internationally adopted children and families: a review of the literature." *Child and Adolescent Social Work Journal*. 24.3 (2007): 285-311.