Research Article

Hanna Pułaczewska*

Adolescence as a “critical period” in the heritage language use. Polish in Germany

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Abstract: In the article, we consider the impact of adolescence upon the usage of Polish in Polish-German bilinguals raised and living in Germany and demonstrate how adolescence surfaces as a socially based “critical period” in this usage using results from a survey and interviews conducted with 30 teenagers. In the quantitative part of the study, we seek to establish whether adolescents’ age affected the pattern and quantity of their usage of Polish in the media and contacts with age peers, whether the latter two facets of growing up with Polish were interrelated, and which other factors affected peer-relevant activities in Polish. Both age and peer contact turned out to significantly affect the use of the media in Polish, while peer contact in Polish was affected by the parental use of Polish in parent-child communication. The qualitative part presents the context and motivation for using Polish by the youths in peer-relevant activities. We integrate the results with insights provided by child development psychology from the perspective of language socialisation theory and interpret the age-related decline of interest in the Polish media as an effect of a diminishing role of parents and the increasing role of age peers as role models in personal development.

Keywords: heritage language, migration, adolescent, critical period, peer group, media usage, maturation, language socialisation

1 Introduction: Motivation and goal of the study

In the following article, we consider the impact of going through adolescence upon the usage of the heritage language in Polish-German bilinguals raised and living in Germany and demonstrate in which sense early and middle adolescence may be regarded as a “critical period” in this process. The term “critical period” has been borrowed from the well-known psycholinguistic hypothesis about the critical impact of age upon language development. In this article, it is used to refer to social tendencies in the usage of a language, reflecting its personal significance for the speaker, rather than psycholinguistic facts about proficiency development.

The discussion is based on a small-scale quantitative survey and interviews conducted with teenagers of Polish origin living in the south of Germany, as well as interviews with their Polish-speaking mothers. The discussion of the results integrates insights from child development psychology and language biography studies from the perspective of language socialisation approach. In the quantitative part, we look at interrelations between age, the contacts in Polish with age peers in Germany and Poland, and the usage of Polish media by means of statistical procedures, in order to see whether the relations found in the sample can be held to reflect trends in the whole relevant population. The goal of the quantitative part of our study

* **Corresponding author: Hanna Pułaczewska,** Institute of Linguistics, University of Szczecin, al. Piastow 40b, Szczecin 71-065, Poland, e-mail: hanna.pulaczewska@usz.edu.pl, tel: +48-690676432
ORCID: Hanna Dorota Pulaczewska 0000-0002-7155-8306

was to establish whether the adolescents' age affected the pattern and the quantity of their usage of the Polish language in the media and contacts in Polish with age peers, in how far the latter two facets of growing up with Polish were interrelated, and which further factors affect the profiles of peer-relevant activities in the heritage language.

The second, qualitative part presents the context and personal motivation for using Polish by these youths in peer-relevant activities, discusses the contribution of Polish to their socialisation, and highlights the way in which peer relationships affect the role played by Polish in their lives as they pass from early to late adolescence. We view the usage of Polish in peer-relevant contexts as symptomatic for its participation in the construal of personal identity in the period when teenagers become less dependent on parents and more peer-oriented instead.

The study and our hypotheses were inspired and informed by the case study by Caldas and Caron-Caldas (2002). The authors noted a shift of language preferences in early adolescence of their three bilingually raised children over a period of 6 years spanning a period from childhood to adolescence, ending in 2000. All children achieved high competence in both French and English including literacy. The authors tracked the change by means of recording family dinner conversations which occurred in their homes in predominantly English-speaking Louisiana during the academic year. The study indicated that their language preference in the home during the academic year changed markedly towards English at puberty. Even though two children attended a French immersion program, English was the language spoken by the peer group when outside of the classroom. A dramatic change of preference started occurring in all three children, with French dropping out of usage, when they were 12. However, when in Quebec where they regularly spent summer holidays and associated with French-speaking friends, French became almost exclusively their language at family mealtime conversations at the same period. The authors recognise the challenge of adolescence in creating a consistent personal identity and emphasise the influence of the peer group on the adolescents as an important social institution whose impact brought about assimilation in clothes worn, music listened to, and speech. Another case-based discussion of repercussions of coming into adolescence in heritage language maintenance on parallel lines can be found in Okita (2002).

We wanted to test whether their findings could be generalised to the bilingual context involving Polish as a minority heritage language in Germany, and whether a change occurred in a sample of teenage respondents over a time range spanning early, middle, and late adolescence. While also looking at face-to-face communication, we decided to focus on bilingual teenagers' heritage language usage in the new media because the usage of such media for entertainment and communication functions today as part of the youth culture and, thus, constitutes an aspect of forming an age-adequate personal and social self. The youth culture is an important component of adolescent personal identities since the second half of the twentieth century when emphasis on differences between generations began to form. While Caldas and Caron-Caldas (2002) do not refer to the social media, Internet surfing, video sharing, and gaming as aspects of peer-oriented culture, it should be pointed out that they collected their data in the years 1994–2000, when these activities did not constitute a prominent aspect of teenagers' everyday lives the way they did 15 years later.

Our study sought to establish which measurable factors correlate with the scale of the usage of Polish by the respondents in their self-regulated language use, that is, in the media and peer contacts. In particular, we aimed to find out whether the contribution of Polish to peer activities, that are crucial to developing the sense of identity, changed as the respondents passed from early to later phases of adolescence, and whether Polish became relatively less important in their media consumption over that time span. We also wanted to see whether the usage of Polish among peers and in the media by our respondents while in Germany was affected by contacts they maintained with age peers in Poland.

To contextualise our Regensburg study, it is essential to add that the Poles in Germany live under conditions of "scattered immigration" in which a specific Polish-German youth subculture has hardly a chance to form, with only about 6% of the youths having Polish origin and intergenerational transmission of Polish in about 40% of cases (cf. Pułaczewska 2018). This is accompanied by lack of strong distinctions between Poles and Germans other than the home language (such as food, looks, and religion, for example).

2 Theoretical background: Ethnic identity and language socialisation in adolescence

Berry (1997) observes that adolescents from immigrant backgrounds face issues of adaptation involving both the heritage culture and the host culture. They may develop an ethnic identity as members of minority ethnic group within the larger society, in particular when their parents are immigrants and maintain the language, values, and customs of their countries of origin (Phinney et al. 2001). On the other hand, they grow up as members of the larger society and the national school system which socialises them to know and share the ways and values of the host country. In ethnically diverse schools and communities, "adolescents are likely to interact with peers both from their own ethnic group and from other cultures. The differences between the two cultures present these adolescents with many choices in areas such as cultural practices, language use, and friendship. Both the values and attitudes expressed by their parents and those they encounter among their peers are likely to play a role in the formation of ethnic identity for these youth" (Phinney et al. 2001, 136). Ethnic identity is being conceptualised as a subjective sense of belonging to an ethnic group and the feelings and attitudes that accompany this sense of group membership (Phinney 1990). With the onset of adolescence, as part of the larger task of ego identity formation, most minority youths explore the meaning of being a member of an ethnic group within a larger society (Phinney 1989). As for the role of the heritage language in this process, Phinney et al. (2001, 136) calls the latter "perhaps the most frequently cited contributor to ethnic identity" and quotes Giles et al. (1977, 307) stating that "Ingroup speech can serve as a symbol of ethnic identity and cultural solidarity. It is used for reminding the group about its cultural heritage, for transmitting group feelings, and for excluding members of the outgroup from its internal transactions." Examples of studies that show the relationship between heritage language competence and/or usage on the one hand and ethnic identity on the other in children and youths are Bankston and Zhou (1995) on Vietnamese adolescents in the USA; Lawson and Sachdev (2004) on Sylheti-Bangladeshi in the UK; Oh and Fuligni (2010) on adolescents with Latin American and Asian background in the USA; Kang and Kim (2012) on Koreans in the USA; Lam et al. (2020) on British Sikhs; and Gibbon and Ramirez (2004) on Spanish adolescents in Australia. A meta-analysis of the correlation between heritage language and ethnic identity by Guanglun (2015) based on 18 studies including 43 respondent samples points to a moderate but statistically significant positive correlation between the sense of ethnic identity and proficiency in the heritage language across various ethnic minorities.

According to the social identity theory, as the sense of belonging and ethnic "affirmation" is accompanied by, and based on, values attributed to groups, it provides psychological well-being to group members and plays a positive role in their self-concept. Research on ethnic identity in adolescents and young adults has frequently addressed its psychological implications. Conducted predominantly by ethnic minority members, studies have shown that ethnic identity, correlated with language competence, was also positively correlated to desirable psychological outcomes, including self-esteem and well-being (Phinney 1992; Phinney et al. 1997, 2001). However, this position is not without controversies – different conclusions have been drawn by the German social scientist Esser (2006), much quoted in Germany and not a minority member himself. Esser (2006, 75) claims that there are no indices for a positive effect of heritage language acquisition for self-esteem and well-being of children of immigrants, and the opposite is likely the case.

Language socialisation theory renders language acquisition as a process by which individuals acquire the knowledge and practices that enable them to participate effectively in a language community. According to this approach, language competence is acquired in the process of language socialisation that occurs through social interactions between insiders and less proficient novices, in which novices get access into aspects of culture. The acquisition of a language, including a heritage language or a majority language, is a facet of social identity development in which what an individual seeks and acquires is not language competence per se but primarily "membership and the ability to participate in the practices of the communities in which the language is spoken" (Duff 2012, 564). This is to say, language acquisition is viewed as a process of extending the means to function as a person possessing an individual voice in a community of people using the language to be acquired, being able to create and sustain a social self and

enter into social relationships via this language, thus satisfying a number of social needs. The instrumental function of language competence as a means to fulfill needs of different order (food, shelter, information) is clearly out of focus. By marginalising instrumental needs as a vehicle for developing communicative competence, language socialisation theory indirectly defies the simplicity of Maslow's priority hierarchy of human needs. (The latter is implicitly based on a self-sufficiency view of an individual and the individualist assumption that individual biological survival is always desirable even in absence of relevant others, while disregarding the fact that enduring survival is only possible in bond-based groups.)

According to the language socialisation theory, language socialisation triggers acquiring language competence in personally relevant domains because it creates a need for language resources as means of self-expression and construction of social self. Thus, language competence including sociolinguistic competence participates in personal and social identity construction. The concept of self plays a central role in socialisation theories. While it has been expanded to refer to a variety of mechanisms, "self" basically refers to "relatively stable schemata of oneself that are generalised to the extent that they refer to an individual's view of him- or herself across different situations" (Nuermi 2004, 95).

As language socialisation occurs through interaction, relationships of some durability play a crucial role in this process. Relationship networks that teenagers are part of include crucially the family, school, and non-institutionalised peer relationships. In what follows we will discuss the impact and significance of the changes of the relative importance of family and peer group as sites of socialisation in early and middle adolescence. Early adolescence is the period between puberty and the age of 14; it is followed by middle adolescence that ends with 17 years when late adolescence is reached.

Peer contacts frame and are framed by a number of relationships such as friendships, romantic relationships (dating), cliques, crowds, adversarial dyadic relationships (bully-victim as well as more symmetrical antipathy-based dyads) and antagonistic relationships between cliques (Brown 2004). This categorisation is based on US-American education system where post-elementary students mix differently in different courses at school and needs to be amended by a student group as an important social unit that frames teenagers' school experience in Europe. The needs satisfied by peer friendships include reciprocity, mutuality, companionship, security, and intimacy (Bukowski et al. 1994; Hartup and Stevens 1997). Also, peer cliques offer opportunities for probing one's place in social hierarchies of shifting and reshaping groups. They are often formed within student groups out of people with similar outlooks and inclinations. They contribute to self-image and self-esteem by support and feedback on personal traits, skills, and competences that group members can observe, such as educational achievements, gaming, and peer-related social competences such as offering support, winning, and sustaining a position in a group or resolving and winning conflict. This complements parental support and feedback which is limited to traits, skills, and competences observable in the framing of the home.

Adolescents in a particular peer group exhibit many similarities compared with adolescents in other groups. This has been reported for many characteristics, such as aspirations, school work, and problem behavior (Nuermi 2004, 96). In these and related areas, peer groups provide role models, feedback, and a platform for social comparisons (Nuermi 2004, 96). Second, adolescents may select peer groups that share their interests and characteristics, or they may leave groups that do not (Nuermi 2004, 96). Selection and socialisation into peer groups are assumed to play an important role in the ways in which adolescents deal with the transition into adulthood.

Post-pubertal changes in western societies have been observed to crucially include the changes of relative importance of parents and peers in adolescent's lives. Starting from early adolescence, children spend increasing amounts of time with their peers both at school and after school (Larson and Richards 1991), whereas they spend less time with their parents (Collins and Russell 1991). Children's decreasing closeness to their parents is associated with their increased orientation towards the peers. Steinberg and Silverberg (1986) proposed that the transition from childhood to adolescence is accompanied by a trading of dependency on parents for dependency on peers rather than a direct growth in autonomy.

Parents and peers have been found to play different and complementary roles in individuals' ways through adolescence. Hunter (1985) found that adolescents discussed particularly topics that related to future adulthood with their parents (academic, vocational, economic, social, and ethical issues), while

interpersonal relations were mainly discussed with friends. However, Malmberg (1996) argued that the peer group is also an important context in which future-related issues are discussed. Young people and their peers share similar kinds of goals and aspirations (Hallinan and Williams 1990). Particularly intimate friends and those of the same gender share similar goals (Hallinan and Williams 1990).

An important role in shaping behavior and self in adolescence is played by the popularity issues. LaFontana and Cillessen (2010) examined the degree to which children and adolescents prioritise popularity in the peer group over other relational domains. One thousand and thirteen children and adolescents aged 6–22 years were presented with social dilemmas in which popularity among peers was opposed to five other priorities: friendship, personal achievement, following rules, prosocial behavior, and romantic interests. Adolescents prioritised status enhancement in the peer group over other domains. Gavin and Furman (1989) found that early and middle adolescents value membership in a popular group more and behave more alike, following the norm set by the group, than preadolescents. These findings suggest that in adolescence, youth become increasingly concerned about their position in the peer group.

Being related to social needs, language acquisition plays a role in identity formation because it is via language that a person can be an individual with particular characteristics and express this identity in relationships with others. By learning a language, an individual extends a repertoire of means of self-expression, creation, and maintenance of a self-image and projects this image to the outside world. Early adolescence is a time when people become conscious about their public image, start being concerned with it, and consciously apply means to give it a desired shape. The peer group plays the main role in this venture, by providing norms and aspirations towards which to orient oneself. The attitudes towards, and practicing a heritage language change accordingly. Caldas and Caron-Caldas (2002) recognise the challenge of adolescence of creating a consistent personal identity and the added difficulty for bilingually raised adolescents who need to cope with the question of assimilating bilingualism into their developing identities. They emphasise the influence of the peer group on the adolescents as an important social institution whose impact brought about assimilation in clothes worn, music listened to, and speech. They also comment on the choice of English as a language of family conversations in their children in adolescence while in the English-speaking peer environment saying that "adolescence involves disengagement from the family, and for John, not speaking French was one way of 'denying parental domination of personal behavior' (Eckert 1989:70)."

To sum up, a lack of interest in creating a public self-image in the heritage language for the sake of usage in the peer group is likely to result in the language dropping out of use in adolescence. We undertook to examine whether and to which extent this occurred in bilingual youths of Polish origin living in Regensburg.

3 Method and sample

Our study was conducted in the years 2015–2016 in the middle-sized city of Regensburg located in the south of Germany. Forty one respondents aged 12–18 raised in Germany since birth or before preschool were recruited by the snowball method starting from the author's personal network.

The respondents were visited in their homes. The encounters with teenagers of the duration of 120–140 min included filling oral and written questionnaires, a language proficiency test, and a semi-structured interview. Mainly because of the long duration of the meeting and in order to prevent exhaustion and loss of interest, the form of data elicitation for the quantitative part of the study varied between the written questionnaire (data on usage of Polish in Germany) and oral questionnaire (data on friends in Poland and attitudes). The interviews that followed concerned their language biographies, friends, and hobbies, people with whom they used Polish and attitudes towards Polish and Poland.

The respondents' language competence assessed by means of a standardised test including conversation (with ratings based on comprehension and speaking), reading aloud, reading comprehension, and a brief dictation ranged from fair to very good. "Fair" meant being able to have a conversation including reporting and evaluation of everyday experience while displaying a limited range of vocabulary along frequent self-corrections and mistakes in syntax and inflection, accompanied by a degree of reading

comprehension. Out of 41 recruited participants, we excluded 11 people who did not meet the criterion of possessing language competence that would surely allow them to get involved in the above-listed activities by means of Polish. Thirty respondents in our final sample achieved at least a "fair" score of 5.3 on a scale 0–12 (none to very good), with a mean of 9.1.

All 30 participants lived with their Polish-speaking mothers and estimated the proportion of the Polish language input of at least one parent (which was the mother in all but one case) in communication with themselves as not lower than 20% while it used to vary in time, with 27 out of 30 respondents reporting Polish-only home language policy of the Polish-speaking mother before preschool. Around the time of the interview, the respondents' mothers communicated with them in Polish between 5 and 100% of the time, and fathers between 0 and 100%, with a mean of 78% for mothers and 54% for fathers. The fathers' native language was Polish, German, or other. The respondents' age mean approximated 15 years. Table 1 shows the sociodemographic profile of the sample in terms of age and gender.

We wanted to know whether peer-relevant usage of Polish in Germany diminishes while the youths pass from early to late adolescence, and whether gender, links to age peers living in Poland, language competence in Polish, and the parental usage of Polish in communication with the child or the respondents' estimation of parents' engagement in their acquisition of Polish affect this usage. Besides, we also wanted to know in how far peer contacts with Polish youths in Poland interact with the use of Polish in contacts with age peers in Germany, and how media usage in Polish interacts with these two aspects of peer contacts.

We analysed the use of the media in Polish for the following categories: social media, watching videos on Youtube and any other platforms for sharing audiovisual content, surfing in the Internet for other purposes, gaming, listening to music, and watching TV and films. Apart from media usage, we also asked about the use of Polish in communication with age peers while in Germany. The adolescents were asked to estimate time they spent on various activities per month within the last 12 months, and the time spent while using Polish in these activities. Besides, they were asked whether they had a same-age friend in Poland since early childhood. Such a long-standing friendship with at least one age peer in Poland where the respondents spent on average 2 weeks per year for family visits surfaced in a parallel study (cf. Pułaczewska 2019) as a robust predictor of adolescents' profiles of competences and affiliations related to Polish and Poland. We also asked the respondents to rate whether their knowledge of Polish was important for their mothers and their fathers, on a four-level Likert's scale ranging from 0 (not important) to 3 (very important). Finally, we asked them whether they were interested in Poland as a country in order to see whether their contacts with age peers in Polish while living in Germany were related to such interest, again on a scale 0–3.

The comparisons between age groups presented in what follows pertain to the following aspects of the usage of Polish for the consumption of the media and peer contacts:
- time spent using Polish while engaging in particular activities,
- the ratio of total time spent with Polish on these activities to total time spent on them in any language,
- the number of activities with some use of Polish.

In view of the samples not being random but selected by the snowball method, it should be asked what the population is that this sample is taken to represent, i.e. for which population the impact of various factors upon peer-relevant use of Polish is being examined. We assume the sample to be representative of, and the conclusions to apply to, teenagers with the following characteristics: children of Polish mothers

Table 1: Sociodemographic composition of the sample

Gender	Age							Total
	12	13	14	15	16	17	18	
Female	1	1	4	2	5	3	1	17
Male	0	2	3	4	3	1	0	13
Total	1	3	7	6	8	4	1	30

living in Germany to whom Polish is passed in the home in a non-trivial degree (i.e. it is used in at least 20% of communication with at least one parent), showing positive or at least neutral attitude to their own bilingualism (as other people could be hardly attracted to participate in the study even though there was a material incentive), with at least fair language competence in Polish.

We also conducted interviews with 20 mothers of 24 respondents included in our original sample of 41. The conversations with mothers lasted between 60 and 90 min and topics of the interview guideline included among other things the parental use of languages in the family in general and the communication with the child in particular, the child's perceived attitudes towards Polish and Poland, and effective strategies of passing Polish to the child. The material collected in the interviews with mothers was tagged and ordered along the guidelines of Thematic Analysis (cf. Braun and Clarke 2006). The qualitative findings from these interviews have been described in detail in Pułaczewska (2018, 2019). Here, some of these findings will be quoted to throw an additional light on the motivation for our hypothesis that passing from childhood through early to later stages of adolescence affects self-regulated use of Polish negatively.

4 Quantitative results: Factors affecting activities in Polish

Polish played some role in peer-relevant media usage for the prevailing majority of our respondents. Only 7 out of 30 did not use any media in Polish, and for 12 of them, Polish also played a non-trivial role in peer contacts (10% and more), while 16 did not use it at all in peer contacts. The respondents engaged on average in 2.83 activities in Polish. This corresponds to the mean usage of Polish in peer-relevant activities of ca. 22 h per month, including 4 h of direct contacts with peers in Polish. The means for particular activities are shown in Table 2, while the column "Total" refers to the ratio of time spent on all these activities in Polish to time spent on all of them in any language. Activities not engaged in by a respective respondent in either language were ignored. Table 3 shows this total usage for various categories of age, gender, and having a peer friend in Poland or otherwise.

Table 2: Activities in Polish in percentages of activities in any language, and in hours per month

	Youtube	Social media	Internet surfing	TV and films	Games	Music	Media total	Peers	All activities
Percent	0.17	0.17	0.14	0.24	0.15	0.13	0.19	0.12	0.17
Hours/ month	0.5	3.6	2.2	5.6	0.7	5.4	17.9	4.4	22.3

Table 3: Usage of Polish in peer-relevant activities in different age groups and binary categories gender, having a friend in Poland

	N	Percentage of Polish in peer-relevant activities	Polish in peer-relevant activities in hours/month
Age group			
12–14	11	0.17	31
15	6	0.16	28
16	8	0.04	6
17–18	5	0.10	11
Friend in Poland			
Yes	14	0.16	17
No	16	0.11	8
Gender			
Male	13	0.10	14
Female	17	0.14	28

Table 4: Proportional use of Polish in peer-relevant activities in various age groups

Age	*N*	Youtube	Social media	Internet surfing	TV and films	Games	Music	Media total	Peers	Total
12–15	17	0.17	0.17	0.14	0.24	0.15	0.13	0.19	0.12	0.17
16–18	13	0.06	0.06	0.01	0.08	0.01	0.07	0.06	0.08	0.08

We noted that a drop of activities in Polish occurred between the age of 15 and 16. Therefore, the mean usage of Polish in particular activities and in total expressed in percentage of the total time devoted to these activities in any language is shown in Table 4 for the so distinguished age groups 12–15 and 16–18, with 17 and 13 members, respectively.

The time with Polish in all peer-relevant activities (consisting of direct contacts with peers, and media usage) declared by the respondents in the group aged 12–15 amounted to 17% of the total time they spent on these activities, while the time declared by respondents in the group aged 16–18 amounted to 8% of the total. The two age groups also differed in their total media usage in Polish, with a higher value of 19% for the younger group and a lower value of 6% in the older group. Smaller differences occurred between people with and without a friend in Poland, and both genders.

We also counted the number of activities in Polish for each person and found out different proportions of people who declared no activities, very few (1–2) activities, and a higher number of activities in Polish in the younger (12–15) and the older (16–18) age groups. The younger group showed a clearly higher activity profile. The number of activities that the respondents engaged in while using Polish is shown in Table 5.

It should be noted that counting activities based on the criterion of some/none usage of Polish were less susceptible to subjective error, and made the overall results less dependent on the respondents' ability to quantify their use of Polish relatively to their overall engagement in activities under study. Thus, such presentation flattens the data by levelling out differences between respondents in their estimates given in figures. However, figures declared were also highly meaningful because even if they could not be fully relied upon, they indicated the subjective importance of Polish for the respondents.

We hypothesised that besides age, several other factors may have exerted influence on peer-relevant communication: gender, having a peer friend in Poland, the importance of the child speaking Polish for the mother, the importance of the child speaking Polish for the father, the sum of both (mother and father), the respondent's language competence in Polish, and the degree to which the parents spoke Polish to the child, in percent of the total. The latter was the mean of the mother's and the father's or stepfather's usage estimated by the child and equaled the usage of Polish by the mother for the mothers who raised their children alone. Besides, we assumed that the degree of using Polish with peers could influence the media usage of Polish.

Each factor could function as a confounding variable when we tried to establish the impact of the remaining factors by means of a statistical analysis of variance if the factors were correlated. Therefore, we calculated correlations between the potential impact factors in order to establish which of them interfered with each other and could not be used simultaneously in an analysis of variance (ANOVA). The following factors proved to correlate among themselves, with Pearson's correlation coefficient $r > 0.5$, criterial for mutual exclusion as continuous predicting variables: friend in Poland and score in the language competence test ("score"), $r = 0.61$; friend in Poland and parental use of Polish in the communication with the child ("Polish at home"), $r = 0.52$.

Table 5: The number of activities in which the respondents used Polish

Factor	Number of activities in Polish	*N*	3 to 7	1 to 2	0	Mean
Age	16–18	13	5 (38%)	4 (31%)	4 (31%)	2.1
	12–15	17	10 (59%)	7 (41%)	0	3.5

To perform the analysis of variance with continuous predicting variables, we built two sets of potential predictors for peer contacts in Polish. Both sets included age, gender, importance of the child knowing Polish for the mother, and importance of the child speaking Polish for the father. The first set further included "friend in Poland," while the second set included "Polish at home" and "score." (The correlation between "Polish at home" and "score" was unexpectedly low, $r = 0.30$, and below significance at $p < 0.05$; this was due to outstandingly high diligence of mothers whose husbands did not speak Polish in passing it to their children, cf. Pułaczewska 2019. Neither was "score" correlated to the teenagers' use of Polish in peer contacts, $r = 0.049$).

For media usage, we added "peer contacts in Polish" as an additional continuous predicting variable next to the aforementioned two set of factors. Thus, we again obtained two sets of potential predictors with weak and very weak correlations among themselves.

As for correlations, peer contacts in Polish and media usage proved to be significantly correlated at $p < 0.005$ with Pearson's correlation coefficient $r = 0.50$. Age and Polish media usage were significantly and adversely correlated at $p < 0.02$ with $r = -0.34$. Under an ANOVA test (conducted with IBM SPSS 24), age and peer contacts in Polish surfaced as the only significant predictors of adolescents' media usage in Polish. The remaining factors did not approach significance. This did not change when we replaced the factors "importance for mother" and "importance for father" by their sum as one factor.

The mean parental usage of Polish appeared to be significantly related to peer contacts in Polish at $p < 0.05$, with Pearson's $r = 0.44$, while media usage was not affected ($r = 0.147$, $p = 0.22$). The results of an ANOVA test pointed to "Polish at home" as the only significant predictor of peer contacts in Polish. In other words, no factor besides the parental usage of Polish in the home could be shown to relate to the usage of Polish in the peer group.

No factor insignificant in a calculation conducted with one set of factors surfaced as significant in a calculation conducted with a different set of factors. The lowest value from all calculations is shown in Table 6.

The influence of peers was constant for all activities in Polish apart from music, which was not affected by any factor. As for particular categories, the use of Youtube in Polish proved to be significantly related to age and local peer contacts in Polish, while the use of the social media in Polish proved to be significantly related to local peer contacts in Polish, having a friend in Poland, and Polish language competence ("score").

The declared interest for Poland as a country had a mean of 1.68 on a four-point Likert scale ranging from 0 to 3. Five people declared no interest, and ten people declared definitive interest, with the rest in between. We tested whether age, importance for mother, importance for father, their sum, contact with local age peers in Polish, language proficiency score, or the parental usage of Polish at home were related to the declared interest in Poland as a country, in pairwise, and larger combinations of these factors. Their relation with the respondents' interest in Poland as a country did not approach significance in any measurement.

5 Interpretation of the quantitative results

The results confirm a continuous adverse impact of age on peer-relevant media usage in Polish in adolescence. Younger respondents showed a higher activity profiles in Polish than respondents in the older age group. Having a peer friend in Poland was not significantly related to this usage except in the social media, for which respondents with a friend in Poland showed a higher profile. Also, language competence in Polish was only significantly related to the use of social media in Polish and did not affect the overall media use in Polish. The estimation of how important the knowledge of Polish in the respondent is for the parents and the usage of Polish by parents in communication with the child could not be shown to matter for its usage in the media, even though contact with peers in Polish was related to the parental usage of Polish which was the only significant predictor of the former.

Table 6: Factors affecting media usage and peer contacts in Polish

	Youtube	Social media	Internet surfing	TV and films	Games	Music	Media total	Peer contact
Age	$F = 7.842$, $p = 0.016$	x	x	x	x	x	$F = 6.800$, $p = 0.018$	x
Peer contact	$F = 5.166$, $p = 0.042$	$F = 8.086$, $p = 0.012$	$F = 9.966$, $p = 0.007$	$F = 21.060$, $p = 0.000$	$F = 8.735$, $p = 0.014$	x	$F = 11.522$, $p = 003$	x
Friend in PL	X	$F = 8.281$, $p = 0.012$	x	x	x	x	x	x
Imp. for Mother	x	x	x	x	x	x	x	x
Imp. for Father	x	x	x	x	x	x	x	x
Gender	x	x	x	x	x	x	x	x
Score*	x	$F = 5.757$, $p = 0.029$	x	x	x	x	x	x
Polish at home	x	x	x	x	x	x	x	$F = 5.176$, $p = 0.034$

*The score achieved in the standardised test of the Polish language skills.

It surfaces that if there was a parent-induced interest in the Polish media at an earlier stage, it does not matter in the age group under study. Also, it could not be shown that peer contacts in Germany in which Polish is used are related to the interest in Poland as a country. Rather, such usage appears to possess a local relevance as one among ways of similarity-based bonding with age peers. The proportional usage of the Polish media diminished significantly while the teenagers grew older, while the local peer group surfaced as the only kind of social relationship (among the relationships under study) surely relevant to this usage, nourishing its continuation beyond puberty.

6 Peer group in interviews

Below, the changes that the teenagers and family life undergo when children reach adolescence are summarised on the basis of data collected from interviews with the youth's mothers. In particular, they showed that the patterns of spending leisure time and media consumption underwent a considerable change at that time:

- Time spent with parents went down, so that the Polish language input got reduced even if the proportion of parental input in Polish to parental input in German did not change.
- The authority of the parents decreased, their persuasion becoming less effective.
- The parents became more prepared to accept the child's autonomy, which resulted in more autonomous choice of activities by the child.
- Activities relevant to age peers increased at the cost of parent-related activities. This usually meant a decrease in communication in Polish as well as a decrease in the consumption of the Polish media, because children were now likely to follow media contents that they could discuss with their German friends. More time was now spent consuming and discussing media inputs – from TV, the internet, social media, music – accessed due to the impact of the peer group, or together with peers. This boosted the input in German. The interest with media contents in Polish went down, because they were of lesser or no relevance to the child's total peer social network. Attitudes and fashions specific for the peer age group became more important relatively to the influence from home.

Joint activities mentioned by teenagers aged 12–15 interviewed for the study in informal, non-institutionalised face-to-face contact included playing football, gaming, watching films and Youtube videos, listening to music in the form of mutual display of one's favourite music to others, watching fashion magazines, and conversational activities: gossiping and criticising others as well as discussing relationships, films, games, Youtube videos, music, sport, and other hobbies. Older adolescents also occasionally discussed local and global political themes and news as well as their childhood and personal development. Generally, the input in Polish went down at that time, while the input in German rose because German predominated strongly in communication with local age peers including siblings. Even if the respondents had friends in Germany who could speak some Polish, German was the preferred language of communication among them.

Yet, 12 out of 30 respondents reported a non-trivial use (i.e. at least 10%) of Polish in undertakings with their age peers in Germany (while 16 never used Polish in such contacts). The question arises in which circumstances Polish is used, and for what purpose. The information on respondents with high proportion of peer contacts in Polish extracted from interviews is given below.

Not all communication with peers was based on free choice of language, while parental wishes were only obeyed in presence of parental control. Two respondents spoke Polish with their peers when the communication took place under parental supervision because their Polish parents insisted on their using Polish with people who spoke it.

Communication in Polish occurred mainly within the same gender. Seven out of 14 people who used Polish in communication with either male or female peers never used it in cross-gender contacts. Only four respondents reported using the same (2 people) or larger amount of Polish (2 people) in cross-gender contexts than in same-gender contacts.

Three male respondents who went to the same student group and the sister of one of them declared having created a small Polish-speaking environment for themselves in their school student groups where people pupils with ethnic backgrounds other than German were a large majority (75% and 83%, respectively). This is exceptional among schools in Regensburg, while it occurs more often in big cities – Berlin, Frankfurt, Munich, Hamburg, and Berlin. Such an ethnic structure of a student group boosts the likelihood of cliques building along ethnic lines and is likely to have contributed to the high profile of Polish language use in face-to-face peer communication. Two of the aforementioned four respondents had several peers friends in Poland and spoke it fluently. The relatively much lower language competence in Polish did not prevent the remaining two youths from having a high proportion of peer contact in Polish in Germany, while it prevented one of them from using Polish when talking to his mother who responded to him in this language. This we take to illustrate the role of Polish as a way to bond with age peers, while the psychological need of bonding with a parent by the same means is absent, or present to a lesser degree. One female respondent from this group used Polish regularly in communication with a deskmate at school who had Russian parents and responded in Russian, which is another Slavic language of a very similar syntax and some similarity in basic vocabulary. This mode accounted for about 10% of interaction between them and would have been higher had it not been prevented by teachers.

Four respondents among those with high peer usage of Polish in Germany (but also three other respondents) went to a summer holiday camp in Poland where they were supposed to mix with the Polish youths. This did not result in lasting friendships in Poland because they mainly stayed among themselves and used German almost exclusively while in Poland. However, this resulted in some lasting friendships among them and occasioned some Polish language use when back in Germany. One of them reported: “When we met again back at home, we just wanted to see for fun whether we could keep talking Polish with each other for one day, and later we just kept talking like that sometimes.”

Almost all respondents pointed out or confirmed that they used Polish for secrecy or, rarely, in a provocative manner, especially to comment on or gossip about others. With two exceptions, the teenagers responded negatively to the question whether their choice of friends or initial sympathy they feel when meeting a new person was affected by sharing Polish with them as a heritage language.

A suggestive difference that surfaced in the interviews was that people who had a friend in Poland, high peer contacts in Germany, and corresponding high profile of media usage in Polish were all bound into peer groups in Poland rather than having single friends there. Those with single friends tended to have no bilingual peer contacts in Germany. This data could not be used in the quantitative analysis because the method of collecting quantitative data was not sensitive to the difference between individual and group contacts in Poland, and it was not for all respondents that data were available on the relationships between their Polish friends. This tripartite relationship (between being a peer group member in Poland, high usage of Polish with other bilinguals in Germany, and using Polish media) could become a focus of investigation in the future.

As for peer contacts in Poland, an experience that surfaced in some interviews was the feeling of inadequacy because of lacking knowledge of the Polish youth slang which these respondents liked, admired, and aspired to. This occurred both in younger and older respondents (12–16).

7 Conclusion

The quantitative analysis showed that the usage of Polish in the media and peer contacts Germany diminishes generally between early and middle adolescence. They are linked to each other in that the youths who have peer contacts in Polish in Germany consume more media contents in this language. Insights from semi-structured interviews with teenagers and their parents were in line with the contention of developmental psychologists that the peer group considerably affects the social development of teenagers and activities they get involved in, including their media consumption.

While some teenagers of Polish origin actively use similarity constituted by having access to a common language other than German to bond with their age peers, this is not significantly dependent on their interest in Poland as a country. Nevertheless, contacts with age peers involve a degree of active heritage language maintenance even in absence of such interest, and the use of Polish continues in relationships in which it was used at earlier stages of acquaintance. What it offers is an additional similarity-based means of bonding within a peer group, including the means of strengthening the existing bonds within a clique or in a binary relationship by excluding others from conversations as well as unrestricted criticising and gossiping about them even in their presence. Moreover, as long as some threshold level of language competence is reached, engaging in such communication with other Polish-German bilinguals does not further depend on fluency in Polish. Interestingly, neither do the results suggest that the usage of Polish media, related to the usage of Polish in the peer group in Germany, is related to high level of competence in Polish. As for competence, cf. Pułaczewska 2019 who shows that it is significantly higher for respondents who have peer friends in Poland; summing up these results, it can be claimed that it is a product of direct contacts with monolingual native speakers rather than German–Polish bilinguals.

According to the language socialisation theory, acquisition of language competence is a facet of acculturation to the society in which the target language is used. The respondents' usage of Polish in Germany was not dependent on their own and their interlocutors' Polish language skills. An extreme example of the independence of language skills and the social motivation to speak Polish is the case of the respondent who had merely "fair" Polish language skills and whose conversational partner did not know any Polish at all, communication between them taking place in the form of a bilingual dialogue. Rather than a novice's acculturation to the language community of native speakers, which is the paradigmatic situation discussed in language socialisation theory, we are dealing here with an "acculturation" into a local bilingual peer group, or maintenance of a dyadic relationship, in which German is the optimal means of communication and Polish a commonality highlighted by its usage. A frequent function of the latter is to mark group boundaries by excluding non-members from the contents shared.

In a nutshell, while bilinguals' high language competence, high language-dependent sociocultural knowledge competence, and high self-identification as Polish appear to be an outcome of peer contacts in the old country (cf. Pułaczewska 2019), peer contacts with other German–Polish bilinguals in Germany possess a distinct, local social significance which is only weekly related to the interest in Poland as a country and Polish language skills. The contribution to self through identification with the local bilingual peer group does not seem to be strongly related to identification with the old country's society as such, even though, surely, the latter provides a general relational background (through awareness of family history, shared experience of visiting relatives, and some first-hand knowledge of people and country).

Peer-related interests and activities help develop children's language competence and sociolinguistic competence by offering them age-adequate language socialisation in the majority language and participation in its youth culture. Among other things, such socialisation gives them an access to a language code endowed with a potential for identification with their own age group, which plays a crucial role in the development of self at and around puberty in modern western societies. Socialisation through L1 at home is insufficient for developing identification with the community of L1 speakers because, among other things, it does not provide information on age-adequate verbal patterns along age-adequate roles and identities. The lack of self-expression in the heritage language in the peer group leads to a decline or loss of interest in contents presented in this language (the media in Polish) because the range of social roles that can be displayed in it is limited to the role of the family's child. The continued usage of Polish by the parents or a parent in the home does not sufficiently counterbalance the impact of the German-speaking peer group to keep the adolescent's level of interest in things Polish at the same level as in childhood. It is the German-speaking peer group that prevails as the most influential identity-shaping factor as the majority of relevant peers are German monolinguals. Thus, while engaging with bilingual peers significantly weakens this tendency, in general the heritage language use declines along the role played by the parental home in adolescents' social life and profile. The present study demonstrated that as a teenage German-Polish bilingual raised in Germany passes from parent-dependence in early adolescence to the more autonomous stage that follows, the presence of Polish in her life is likely to enter its "critical period" because the impact

of the local youth culture predominates over the bonds of family and ethnicity maintained through the Polish-born parent or parents.

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