Language disorder or language variation?

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Abstract

This paper explores the challenges of diagnosing and treating language disorders in the context of languages with strong dialectal diversity. After defining language disorder and language variety, I use the case of Slovenian to show how the linguistic features of dialect speakers can often resemble those of individuals with language impairments, across all domains from phonology to semantics. These similarities can complicate diagnosis, as dialectal features may be misidentified as pathological speech. Intervention, therefore, must be sensitive to the speaker's linguistic background and respect the speaker's variety. The solution lies in increasing awareness among speech therapists and ensuring they receive appropriate training to distinguish between dialectal variation and disorder. The paper uses as a model the approach US speech therapy has developed for speakers of African American English, illustrating how culturally and linguistically responsive practices can lead to more accurate diagnoses and more effective, respectful interventions.

Key words: language disorders, dialect, Slovenian, Alzheimer's disease, speech therapy

Jezikovna motnja ali narečna raznolikost?

Članek obravnava izzive diagnosticiranja in odpravljanja jezikovnih motenj pri govorcih jezikov z močno narečno razslojenostjo. Po opredelitvi jezikovne motnje in jezikovne različice je na slovenskih primerih pokazano, kako so jezikovne značilnosti govorcev narečij lahko z vidika standarda videti podobno značilnostim pri posameznikih z jezikovnimi motnjami, in sicer na vseh področjih, od fonologije do semantike. Te podobnosti lahko otežijo diagnosticiranje, saj so narečne značilnosti lahko napačno prepoznane kot govorna motnja. Pri intervenciji je treba upoštevati govorčevo jezikovno ozadje in se izogibati odpravljanju narečja. Namesto tega mora terapija upoštevati in spoštovati govorčevo različico. Rešitev je v čim večji ozaveščenosti logopedov in zagotavljanju ustreznega usposabljanja za razlikovanje med narečjem in motnjo. Članek se opira na severnoameriško izkušnjo pri obravnavi motenj pri govorcih afroameriške angleščine kot na uspešen model, kako lahko kulturno in jezikovno odzivne prakse vodijo k natančnejšim diagnozam in k učinkovitejši in spoštljivejši obravnavi.

Ključne besede: jezikovne motnje, narečje, slovenščina, Alzheimerjeva bolezen, logopedija

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1 Introduction

Wednesday afternoons were of particular interest in our Department of Comparative and General Linguistics, as Prof. Janez Orešnik held his office hours. Every time I had a chance, and he was not busy with someone else, I would knock on the door and say 'hi', often stepping in for some chatting. I always learned something new from these discussions but one day, I was the one who taught him some things he did not know…and it was about the Slovenian language.

A recurrent topic of our discussions was how difficult it was for me to hold a normal conversation in Slovenian and him acknowledging that yes, Slovenian is a difficult language, but I should not give up. It was during these discussions that I mentioned that living in Nova Gorica and working in Ljubljana does not help either, as there are many dialectal differences. I said that the good news was that people in Gorica do not use dual, so I could forget about it, but then differences in vocabulary could be significant, so for each concept, I need to learn two or three words. And I burst out with 'local' words, the majority of which come from Italian due to language contact, such as *lampo* 'zipper', *parkedžo* 'parking', *però* 'but', *kalcete* 'socks', *nona* 'grandmother', *panin* 'sandwich' and so on. Prof. Orešnik was, of course, aware of this phenomenon. He was nonetheless excited about each word I said. He took a pencil and started taking notes about their use in Gorica. From time to time, there were things he did not know, and I was the one to tell him about them. A unique moment. After this, the dialectal varieties of Slovenian started entering our discussions more frequently, and it was during these that I started connecting this with my own research areas and realized how ignorant I had been of the problem of linguistic diversity in the diagnosis of pathological speech and its treatment. Therefore, in this paper, I will address this phenomenon, present the specifics of the diagnosis and treatment of dialect-speaking populations, and propose possible solutions.

2 What is considered a language disorder

The term *language disorder* refers to a significant deviation of language abilities from the standard variety, considering the age and stage of development of the individual. It typically results from brain damage, such as stroke-related aphasia or neurodegenerative diseases like Alzheimer's. Depending on the cause, it can affect all language areas. For instance, Broca's aphasia mainly impacts morphosyntax,

causing telegraphic speech with missing or substituted function words and inflections (Goodglass 1993) as in (1).

(1) a. Son...university...good-good
b. Boy...girl...play ball

Similarly, language impairment in Alzheimer's disease (AD) appears early and affects all linguistic domains from phonetics/phonology to morphology, syntax, vocabulary, semantics, and discourse (Manouilidou 2025a). In what follows, I provide examples from Slovenian illustrating the above.

Morphosyntax is an affected domain in people with Alzheimer's disease (pwAD), with manifestations already in spontaneous speech and picture descriptions (Varlokosta et al. 2024). In the Cookie Theft picture, Slovenian-speaking pwAD produced errors such as in (2), in which they used wrong agreement, and in (3), which exhibits incorrect use of preposition (use of preposition before an object standardly used bare).

(2) *tale kosilnico* instead of SS *tole kosilnico*
thisNOM lawnmowerACC thisACC lawnmowerACC
'this lawnmower'

(3) **da odpre lahko v tole* instead of SS *da odpre lahko tole*
that opens can in this that opens can this
'that he may open this'

(Onič 2025)

Morphosyntax and specifically verb-related grammatical information was also affected in the study of Roumpea et al. (2019), which tested Slovenian-speaking pwAD in a sentence completion task, designed to test regular and irregular forms in terms of *present tense* and *aspect* (perfective vs. imperfective). The most frequent mistake produced by pwAD in the category of *tense* was the substitution of the target form of an irregular verb with a form of a regular verb that was semantically close to the target one, as in (4a). Regarding *aspect*, in regular verbs, pwAD tended to produce the imperfective form instead of the perfective target, as in (4b). In irregular verbs, participants tended to produce the opposite aspect (4c).

(4) a. *hodim*$_{\text{regular}}$ 'I am walking' instead of *grem*$_{\text{irregular}}$ 'I am going'
b. *pisala*$_{\text{imperfective}}$ instead of *napisala*$_{\text{perfective}}$ 'she wrote'
c. *vzeli*$_{\text{perfective}}$ instead of *jemali*$_{\text{imperfective}}$ 'they took'

Of particular interest is the area of morphology and word formation, a domain that is significantly affected in a variety of language disorders (Manouilidou 2025b). Manouilidou and colleagues conducted a series of studies on derivational morphology in Slovenian-speaking individuals with Mild Cognitive Impairment (pwMCI) and pwAD. They found that in chronometrized tasks and under time pressure, pwAD often accept as grammatical, formations which violate the combinatorial rules of stem+suffix in Slovenian, either in terms of category of the base, such as in (5) or in terms of argument structure properties of the base verb, such as in (6) or in terms of aspectual specifications, such as in (8). These formations were accepted as grammatical by the pwMCI tested in Manouilidou et al. (2016). The same performance was also observed by Roumpea et al. (2024) and Roumpea (2025) with pwAD in non-chronometrized tasks.

(5) **črkilec* 'letter$_{N}$-er' < *črka*$_{N}$ 'letter'
**čokoladec* 'chocolat$_{N}$-er' < *čokolada*$_{N}$ 'chocolate'

(6) **trpelec* 'sufferer' < *trpeti* 'I suffer' (SubExp verb)
**umiralec* 'dier' < *umirati* 'I die' (SubExp verb)

(7) **prebralec* 'reader-through' <*prebrati*$_{perfective}$ 'read-through'
**preplavalec* 'swimmer-through' < *preplavati*$_{perfective}$ 'swim-through'
(Manouilidou et al. 2016)

Finally, difficulties with word formation and particularly prefixation were also observed by Semenza et al. (2002), who studied the performance of two Slovenian-speaking patients, one diagnosed with agrammatic aphasia and the other with transcortical motor aphasia. The study showed that while prefixes are well-preserved in the grammar of both patients, with no phonological distortions on them, at the same time they were often omitted, as shown in (8) or substituted, as shown in (9). This suggests certain difficulties with prefixation for both individuals.

(8) *svetnik* ‘counsellor’ instead of *nadsvetnik* ‘head counsellor’
(9) *prihod* ‘arrival’ instead of *podhod* ‘underpass’

Additionally, lexical-semantic errors are very common in pwAD (see Manouilidou 2025a). When it comes to Slovenian-speaking populations, Roumpea (2025) showed that pwAD produce semantic paraphasias in a naming task when asked to produce deverbal nominals (10), nouns (11), verbs (12), or they produce circumlocutions (13). The spontaneous speech of pwAD also includes semantic paraphasias and vocabulary distortions, such as in (14) (Onič 2025).

(10) *čolnar* ‘boatman’ instead of *jadralec* ‘sailor’
(11) *sladoled* ‘ice-cream’ instead of *torta* ‘cake’
(12) *plavati* ‘to swim’ instead of *potapljati* ‘to dive’
(13) *vozi kolo* ‘he rides a bike’ instead of *kolesar* ‘cyclist’
(14) *sesalnik* ‘vacuum cleaner’ instead of *kosilnica* ‘lawnmower’

Finally, phonological distortions complete the picture of the language profile of pwAD, as shown in (15), an example of spontaneous speech (Onič 2025).

(15) *se je *popel na stol* instead of *povzpel* ‘he climbed up the chair’

This is a brief overview of language disorders based exclusively on Slovenian data. Such disorders can significantly hinder communication, leading to social isolation, depression, and reduced quality of life. In this context, speech therapy is vital for improving communication and daily functioning. Accurate diagnosis is the first step, and current tools used by speech therapists, neurologists, and neuropsychologists often fail to assess all affected language areas, with morphology being notably underrepresented (Manouilidou 2025b). Moreover, many tools are poorly adapted translations of English tests, often done by non-specialists. To improve this, neurolinguists are working to integrate research findings into clinical practice, and health professionals are beginning to acknowledge the need for better diagnostic methods. The issue is further complicated by the fact that many individuals speak non-standard language varieties, which can affect both diagnosis and treatment.

The next section discusses the term linguistic diversity and its characteristics. On a theoretical level, one would hardly think that the two concepts, i.e., disorder and variety, can be related. However, a careful investigation of data from language disorders and language varieties may bring to light revealing similarities.

3 What is considered a language *variety*

The term *language variety* refers to a system that is governed by rules and deviates in some way from the standard use of language in the dominant culture. Linguistic diversity is a property of living languages and the result of either geographical or social differentiation. It can result either from contact with other languages or from endogenous changes in a given language (Crystal 2008). Linguistic variation is observed at all levels of language analysis, just as in language disorders. In what follows, I will provide some examples from Slovenian dialects to show that patterns found in the dialectal speech of non-impaired populations can often be very comparable to patterns typical of pathological speech.

The domain of inflectional morphology is particularly affected by different geographical varieties. For instance, in certain varieties of the Notranjska dialect group, the suffix *-i* is used instead of the use of the suffix *-u* in Standard Slovenian (SS) in order to form the locative case in masculine nouns (Jakop 2013), as shown in (16) below.

(16) *na hodniki, na sonci* vs. SS *na hodniku, na soncu*
'in the corridor, in the sun'

One encounters similar issues in the verbal system as well. For instance, in varieties of the Štajerska dialect group, the dual is formed with the suffix *-ma* instead of the SS *-va*, as in example (17a) (Jakop 2008). Similarly, in varieties of the Nostranjska dialect group the second person plural in present tense is formed with the suffix *-ste* where SS has *-te*, as in (17b) (Jakop 2013).

(17)

a.	*delama*$_{1.2.dual}$	vs. SS *delava*$_{1.2.dual}$	'the two of us/you work'
b.	*vidiste*$_{2.pl.}$	vs. SS *vidite*$_{2.pl.}$	'you see-plural'

Derivational morphology is similarly affected by dialectal variation. For instance, the suffix *-ar* is used in the Tersko variety of the Primorska dialect group, where SS uses the suffix *-njak*, as in (18).

(18)

a.	*kokošar*	vs. SS *kokošnjak*	'chicken coup'
b.	*čelar*	vs. SS *čebelnjak*	'beehive'
c.	*praščar*	vs. SS *svinjak*	'pig sty'[1] (Ježovnik 2020)

A particular characteristic of dialectal varieties are systematic phonological differences with respect to SS, most of which involve phoneme change and/or replacement, as shown in the following examples from the dialect groups of Gorenjsko (19a), Dolenjsko (19b), and the dialects of Podjunsko (19c), and Srednjesavinjsko (19d).

(19)

a.	*wās*	vs. SS	*las* 'hair'	
b.	*u̯ǫ́če*	vs. SS	*oče* 'father'	
c	*rəka*	vs. SS	*roka* 'hand'	
d.	*aträk*	vs. SS	*otrok* 'child'	(Škofic 2012)

Finally, from the point of view of SS, deviations also occur in the domain of syntax. Some of these include the placement of sentential negation which is split from the finite verb as in example (20a) from the Nova Gorica dialect (Marušič and Žaucer 2016), the lexical verb placement into the final position of the sentence as in (20b) from the Prekmursko dialect (Valh Lopert and Zorko 2013), and the omission of the auxiliary verb in the past tense, as in (20c) (Zuljan Kumar 2022), to mention a few[2].

(20)

a. *če ti ne že malo manjka* vs. SS *če ti malo že ne manjka*
if youDAT not already little misses if youDAT little already not misses
'if you haven't gone a bit nuts.'

b. *gde <u>sem</u> edendvajsti lejt <u>delo</u>* vs. SS *kjer <u>sem delal</u> enaindvajset let*
where AUX twenty one years worked where AUX worked twenty one years
'where I worked for 21 years'

c. *Panč <u>se oglasli</u> pri gospo* vs. SS *Pa nič <u>se nismo oglasili</u> pri gospe*
and REFL dropped by lady and nothing REFL NEGAUX dropped by lady
'And we did not drop by the lady's.'

1 The two words also differ in the choice of stem.

2 Phonological changes in the examples are not marked in order not to divert from their focus.

Looking at the data, pathological speech and linguistic varieties show many parallels, such as differences in grammar, inflection, word formation, phonology, and syntax compared to SS. However, one is clearly a disorder, the other a variety. This raises the question: What happens when a speaker of a language variety develops a language impairment due to brain injury or neurodegeneration? How are such cases diagnosed and treated? Similarly, how easily can language disorders like Developmental Language Disorder be identified in school settings? The following paragraphs explore these questions.

4 Language variety – not language disorder.

Individuals from culturally or linguistically diverse communities face the risk of both misdiagnosis of language disorders and underreporting of speech and language disorders (Roseberry-McKibbin 2002). In other words, either their language diversity could be treated as a disorder, or their disorder could be attributed to language diversity and not treated as it should be. Several factors contribute to these issues: (a) a lack of valid assessment tools for dialect speakers, (b) limited or no data on linguistically diverse populations, and (c) a shortage of speech therapists trained to work with these groups (Goldstein and Horton-Ikard 2010). These challenges increase the risk of misdiagnosis, potentially resulting in unnecessary or inappropriate interventions. Misdiagnosing these language differences can have lasting effects on both a child and an adult experiencing a speech problem. For this reason, the use of language diagnostic tools that allow for the distinction of language variation from language impairment is considered essential (Craig and Washington 2004).

Unfortunately, the Slovenian reality may not be ready to deal with the issue of the dialect-speaking population, either in terms of diagnosis or treatment. This is rather surprising given that work on Slovenian dialects goes back to the beginning of the 20th century, and given that each speech therapist has their own speech variety that is markedly different from SS. In the next paragraph, I give the example of African American English[3], a widely spoken dialect in the United States, and show how awareness-raising has contributed to the proper treatment of its speakers regarding the issue of diagnosis and treatment, especially of school-age children.

3 The case of Slovenian dialects is of course very different from AAE which has been stigmatized among standard US English speakers. However, we can only benefit by looking at how AAE was incorporated in standard diagnosis and treatment protocols.

4.1 Language variety and developmental disorders: the African American example and how awareness contributed to proper treatment

African American English (AAE) is a well-studied English dialect, widely documented by researchers (Baugh 1999). It is one of the few varieties with clearly described language patterns in children's development (Stockman 1996; Washington and Craig 1994). Research on AAE has significantly influenced how psychologists, educators, and speech therapists view children's language and literacy development (Green 2002). As such, let us explore how this happened and what lessons it offers.

The use of non-standard language varieties by children and adolescents is well documented (e.g., Horton-Ikard and Miller 2004; Stockman 1996). Children naturally adopt the dialect of their community, shaped by parents and their environment, making dialect use a normal part of development. Remarkably, although children adopt the language system of adult language patterns, the way in which they do so, by acquiring the specific variety, produces dialectal patterns that may not appear in the adult version of the dialect. This is a common phenomenon in language acquisition, but it is still a critical finding, as it has in the past been a cause of misdiagnosis of language problems in child speakers of AAE (Goldstein and Horton-Ikard 2010).

For example, child speakers of AAE can produce up to 30 distinct patterns linked to the variety (Craig et al. 2003; Washington and Craig 1994, 2002). They also use forms not found in adult AAE, such as the double auxiliary (e.g., *He might can come*), while some adult AAE structures are absent in young children (Washington and Craig 1994). Therefore, the first step in the proper treatment of child speakers of a language variety is to study not only the variety but also the process of language acquisition of the speakers of this variety, by identifying and describing the stages and milestones they need to master.

Another key observation concerns children who speak a non-standard variety when they begin school and encounter literacy. This stage often marks a decline in the use of the variety – the use of AAE, for instance, drops by first grade (Craig and Washington 2004), with a further decline around third grade (Craig et al. 2003). These points coincide with developmental milestones that educators and speech therapists should monitor, as they influence language development. Research also shows that the use of AAE among preschoolers correlates with greater linguistic maturity (Craig and Washington 1995).

The data on AAE has been effectively used to raise awareness among teachers and speech therapists working with AAE-speaking children. Therapists now have the resources needed to help identify language variety based on linguistic features

(Green 2002). It is crucial not only to recognize these features but also to understand how language variety influences development, especially in relation to schooling. A speech and language therapist who is unaware of such differences in language acquisition may mistakenly believe that a child's language is problematic, even if he or she is aware of the characteristics of the child's language variety.

Such approaches have provided excellent support for speech and language therapists working with speakers of a language variety at any age (McGregor et al. 1997; Seymour, Bland-Stewart and Green 1998). The result is that even those speech and language therapists who are unfamiliar with specific varieties are able to examine grammatical and phonological production in spontaneous speech. Speech and language therapists use a list of dialects to distinguish features that are consistent with the targeted dialect from those that are indicative of a language disorder, e.g., absence of a linking verb or inappropriate use of conjunctions.

The AAE example shows that simply knowing a child speaks a non-standard variety is not enough. Educators and therapists must also understand how that variety is acquired and how schooling affects its use. By recognizing the differences and similarities in language development between standard and non-standard variety speakers, speech therapists can better distinguish between typical variation (in syntax, morphology, phonology, semantics) and true language disorders that affect a child's ability to learn language.

4.2 Language variation and acquired language disorders: implications for clinical practice, diagnosis and intervention

As with child speakers, assessing adult speakers of a language variety requires reducing barriers and applying specific strategies to distinguish between a dialect and a disorder. A major barrier is the definition of communication disorder itself. According to Taylor (1986), communication is labelled defective if it significantly deviates from the norms of the dominant community. Dialects often differ greatly from the standard (see examples 16–20), which can lead to misdiagnosis and inappropriate treatment.

However, the biggest obstacle to the accurate diagnosis of language disorders in adults from diverse linguistic backgrounds is a lack of training. A US survey (Roseberry-McKibbin, Brice and O'Hanlon 2005) showed that only 13% of speech therapists had formal training in working with culturally and linguistically diverse clients, while 38.3% had none. Moreover, 77% expressed a need for unbiased assessment tools and updated methods to better distinguish between *language variety* and *language disorder*.

This research shows that speech therapists recognize that many standardized tests are unsuitable for assessing speakers of non-standard varieties. While similar data is lacking for Slovenia, based on my personal experience in the field of diagnosis and treatment in this country, I can say that linguistic variety is often overlooked, leading to inadequate attention and care for dialect-speaking patients.

The evaluation part is followed by the intervention. After identifying language difficulties, the speech therapist works to improve the patient's communication skills. For speakers of a language variety, the goal should be to support their original language patterns, not eliminate them. For instance, if a dialect lacks the dual form, therapy should not enforce it. Similarly, if a patient says *u̯ǫ́če* instead of *oče*, this should be respected. However, current treatment protocols rarely account for linguistic diversity and often overlook these important distinctions.

Identifying and treating language disorders in children and adults is complex and demands that speech therapists be skilled in awareness, knowledge, and practice. Improving understanding of the difference between language diversity and disorder, and providing the appropriate tools, will enhance care for dialect speakers. As societies grow more diverse, therapists face new challenges working with unfamiliar populations. However, with greater cultural awareness and the right resources, therapists can deliver better services and achieve more satisfying outcomes.

5 Conclusions

In this paper, I have attempted to contrast the concepts of *language disorder* and *language variety* and to address the issue of diagnosis and treatment of speakers of non-standard language varieties. Although both *language variety* and *language disorder* are different forms of the standard variety, the disorder needs treatment as it makes it difficult for individuals to communicate. Linguistic diversity, on the other hand, is the natural language of individuals who grow up in communities where linguistic varieties other than the 'standard' are spoken.

The assessment of the language abilities of either adults or children with speech problems is usually carried out by therapists who are trained in the 'standard' variety of the language in question. Very often, however, the population under consideration happens to be speakers of a different variety of the same language, which increases the likelihood of misdiagnosis. In this case, the distinction between language diversity and language disorder is particularly difficult and requires a specialized approach.

Assessment and intervention should be done with respect for linguistic variety and should aim to restore the patient's previous form of language, not eliminate it. Information and awareness-raising on the part of speech and language therapists is required, as well as the use of appropriate diagnostic tools that respect the linguistic varieties in question. *Na sonci* then, is not erroneous use of inflection, but rather a variety of it. Likewise, *aträk* is not a phonological paraphasia. It is a dialectal variety. What is not the standard variety is not necessarily a disorder.

Acknowledgments

I thank Jaš Onič for his help in the preparation of this text. I am also grateful to Rok Žaucer, Sabina Halupta-Rešetar, and Tatjana Marvin for comments on an earlier version. The writing of the current article was supported by the following ARIS (Slovenian Research Agency) grants: project J6-50200, project J6-60109, and program P6-0218.

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