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Repetitions in Genre-Determined Utterances in Patients with Alzheimer's Dementia

SUMMARY

The article deals with repetitions, which occur in the structure of utterances of patients with Alzheimer's dementia. The studies were carried out using the linguistic material obtained in a group of 120 patients with Alzheimer's dementia under the research project "Narrative and Its Disorders in Alzheimer's Dementia. *The Scale of Narrative Skills in Alzheimer's Dementia*" (project manager: Dr Aneta Domagała; 39th Ministry of Science and Higher Education competition of research projects).

All the distinguished categories of repetitions are present both in the utterances of mild to moderate Alzheimer's dementia patients. The most undesirable ones (the subject describes the same objects or their features once again, in an uncontrolled, persistent way) are the most common in both groups. At the same time, their intensity increases as the dementia process progresses (for example: in the description of a place there are more than twice as many repetitions in the utterances of moderate-dementia patients than in mild-dementia patients). Out of the studied types of descriptive utterances, the description of a place was one where most pathological symptoms were reported.

Key words: Alzheimer's dementia, disturbances of text structure, repetitions, perseverations, loop

INTRODUCTION

The characteristics of Alzheimer-related aphasia, the register of leading symptoms (Zec 1993; Łuczywek 1996; Szepietowska, Daniluk 2000; Herzyk 2001, 2005), do not contain repetitions/perseverations. Repetitions (typically: asking the same questions in a very short period of time) are, however, located among the early, externally distinct, symptoms of speech pathology in dementia

(Łuczywek 1996). With the progression of the disease diverse kinds of non-intentional repetitions can be observed, usually classified as continuous and non-continuous, sometimes with special emphasis on impaired set-shifting disorders or ideational perseverations (Bayles 1982; Shindler et al. 1984; Bayles et al. 1985; Hamilton 1994; Marczevska 1994; Ramage et al. 1999, Stark 2007a, 2007b – see also the survey of studies: Domagała 2003, 2007; Domagała, Długosz 2002). In dementia conditions, perseverations may disorganize both verbal and written communication in many ways, which should be taken into consideration when planning assistance measures (Neils-Strunjas et al. 1998; Domagała 2011, 2012).

From the logopedic perspective, in the description of repetitions present in the structure of patients' utterances, and taking account of their determinants and linguistic aspects of phenomena, it is reasonable to point to the loop (in reference to the description of text-making mechanisms analyzed in linguistic literature – Niebrzegowska 1998) as a pathologically determined mechanism of reproducing utterances, which works at the level of its microstructure (here: formally and linguistically identical utterances again appear), macrostructure (here: the previously discussed subject of utterances recurs) and/or superstructure (here: the text pattern is repeated) (Domagała 2013). Repetitions disorganizing the utterances in the way that is not intended or controlled by the speaker (sender), losing their text-creating function and thereby not accepted by other interaction participants should be contrasted with normative behaviours – repetitions of diverse surface nature which are an important exponent of the coherence of the text, a condition for its cohesion (Ampel 1978; Wilkoń 1987, 2002).

Repetitions are one of pathological symptoms analyzed in the assessment of the patient's speech, conducted using the author's *Scale of Narrative Skills* – the results of studies presented in this article are of necessity fragmentary; they complement the description of phenomena, contained in the monograph presenting basic findings resulting from empirical research (Domagała 2015). In the course of analyses of genre-determined utterances it was shown that, unlike in storytelling, in the utterances with the prototypically assumed structure of description, pathological utterances occur in a large percentage of subjects; in some of them they exhibit significant intensity.

MATERIAL AND METHODS

The author's own investigations were meant to prepare a qualitative and quantitative profile of repetitions occurring in the utterances of persons with Alzheimer's dementia (taking the degree of progression of dementia into consideration).

Utterances were obtained using auxiliary materials (photos thematically designed by the author and taken by Dr Robert Rabiej, Institute of Fine Arts Depart-

ment of Visual Knowledge, Faculty of Arts, Maria Curie-Skłodowska University, Lublin); the texts were recorded during individual tests and then transcribed.

For the present study the analysis of phenomena was carried out on the material of utterances on:

- persons (prototypically assumed: description of a person) – Sample 1
- on places (prototypically assumed: interior description) – Sample 2
- on a situation (prototypically assumed: description of a situation) – Sample 3

The empirical material comprises a total of 360 utterance samples (120 samples for each task).

PARTICIPANTS

A total of 120 patients were studied: 60 subjects with a mild stage of Alzheimer's dementia (30 women /group code: ŁK/ and 30 men /ŁM/) and 60 subjects with a moderate stage of Alzheimer's dementia (30 women /group code: UK/ and 30 men /group code: UM – these codes are used in the article to describe the exemplificative material, adding the serial number of the patient investigated). The mean age of the studied population was 76 years and 7 months (for the mild-stage dementia subjects – 76 years and 5 months; for the moderate-stage subjects – 76 years and 8 months; women – 78 years and 7 months and men – 74 years and 7 months).

Empirical studies were carried out at the specialist institutions providing help to persons with Alzheimer's disease:

- Wrocław Medical University's Research and Teaching Center for Dementia Diseases located in Ścinawa – Department of Psychogeriatrics;
- the Prof. M. Kaczyński Neuropsychiatric Hospital in Lublin – Psychogeriatrics Department;
- Rev. Jerzy Popiełuszko Nursing Home in Toruń – Daycare Department;
- Residential Medical Care Facility for Alzheimer Patients in Koprzywnica;
- Nursing Home for Alzheimer Patients in Górnó (John Paul II Independent Public Complex of Healthcare Facilities);
- Alzheimer Center in Warsaw – Daycare Department and Nursing Home;
- Community Home of Mutual Aid for the Wola District in Warsaw – Community Center for Patients with Alzheimer's Dementia Syndrome;
- Community Home of Mutual Aid for patients with Alzheimer's Dementia Syndrome in Kraków (Małopolska Foundation for Assistance to Alzheimer's Disease Patients);
- Daycare and Therapy Center for Alzheimer's Disease Patients in Płock;
- Community Home of Mutual Aid for Alzheimer's Disease Patients in Łódź (Łódź Alzheimer Society);
- Support Center for Persons with Alzheimer's Disease in Kielce;

- Type-C Community Home of Mutual Aid (in Krzemionkowska St.) in Kielce;
- Community Nursing Home in Poznań (Wielkopolskie Alzheimer Association);
- Community Home of Mutual Aid for Alzheimer’s Disease Patients and Nursing Home “Kalina” in Lublin;
- Type-C Community Home of Mutual Aid for Alzheimer’s Disease Patients (in Lwowska St.) in Lublin;
- Community Home of Mutual Aid for Alzheimer’s Disease Patients “Mefazja” and “Memory” (Lublin Alzheimer Association) in Lublin.

Empirical studies were conducted by me in person, each time in an individual contact with the patient studied. I would like to express my cordial gratitude to the specialists in those centers – for their help and kind attitude which I felt while conducting these studies – and to the patients and their caregivers for taking part in the studies.

RESULTS

Qualitative characteristics of phenomena

In the course of analysis of the empirical material regarding repetitions, three principally different categories of linguistic behaviours were identified:

A) Among the normative linguistic behavior distinguished in the *Scale of Narrative Skills*: describing once again the same objects (including their constituents) or their features, emphasizing them in the utterance.

In that case the subject referred to the objects or characterized them, at the same time indicating that this was secondary.

Exemplification:

Ł. K.: A dziewczynka też, też ładna. Ja mówiłam właśnie, że ona ma pasek.
[And the girl is also, also pretty. I was just saying she has a belt]

[ŁK1; T1]

(here: while describing the appearance of one of the persons shown in the photo)

U. M.: Tak jak mówię, podobna jest do mojej córki Ewy. [As I was saying, she looks like my daughter Eve]

[UM30; T1]

(here: while describing the appearance of one of the persons shown in the photo)

Describing the same objects or their features once again usually involved clarification, justification for the formulated opinions, and focusing attention on details that previously aroused interest or even strong emotions (in connection with important personal issues, e.g. a person in the photo resembling one of the speaker's loved ones). These kinds of repetitions in some persons may, however, indicate problems with the continuation of the utterances, i.e. elaborating on the subject: the patient confines him/herself to the information already given and does not provide new items.

These categories of phenomena can be juxtaposed, which is significant in the diagnostic aspect, with behaviors not controlled by the speaker:

B) Out of the pathological symptoms, undesirable phenomena distinguished in the *Scale of Narrative Skills*:

B1. Describing once again the same objects (including their constituents) or their features – undesirable and groundless, in the case of multiple repetitions explicitly identified as not controlled by the patient.

In this case the information given by the subject was repeated; s/he persistently pointed to specific objects or characterized them.

Exemplification:

U. K.: Raczej są tak, na na zimno ubrane. Ta jest na ciepło, bo ma krótkie rękawy. Ta ma dłuższe rękawy. [They are rather, in a way, dressed for cold. This one is dressed for warm because she has short sleeves. That one has longer sleeves] [...] U. K.: Ta jest na na na ciepło ubrana, a ta jest na chłodno [This one is dressed for, for warm and that one for cold] [...] Niewiadomo, ale widać można, że ta jest taka bardziej na ciepło ubrana, a ta na na na chłodno. [You don't know, but you can see it's possible that this one is dressed more for warm and that one for for for cold] [...] A ta jest gruby/ grubiej ubrana, raczej po po po na ciepło raczej. [And that one is dressed in thick, more thick, rather for for for warm rather] [...] I tu raczej na chłodno jest ubrana, a ta jest na letnio ubrana. Z krótkimi rękawkami. [And here she's dressed rather for cold, and that one is dressed for summer. With short sleeves] [...] A tak przyzwocie ubrane obydwie. [And both of them dressed decently] Nie tak żeby były... z gołymi rękami. Ta ma gołe ręce. [Not that they were ... with bare arms. This one has bare arms] A ta ma, już ma sweter jakiś czy coś. [And that one has, already has some sweater or something] [...] Ta z krótkimi rękawkami. Ta ma długie rękawy. [This one with short sleeves. That one has long sleeves] Ta jakby na ciepło była ubrana, jakby gdzieś wychodziła, bo ma korale

złożone na szyi. [This one is sort of dressed for warm, as if she was going somewhere because she is wearing a string of beads around her neck].

[UK22; T1]

(here: talking about the appearance of two persons shown in the photo; in the convention of comparative description the selected feature is repeatedly discussed).

Multiple repetitions result in the receiver (hearer) constantly obtaining the same or similar information. Repetitions of this kind may refer to parts of an utterance, may give it a special structure (e.g. when the subject successively describes both persons, and then s/he again chooses the first one for description and expands his/her utterance the way s/he did before).

B2. Describing once again the same objects (including their constituents) or their features – without the subject being certain whether this has already been said before.

In this case the speaker showed that s/he did not know what his/her own earlier utterance was about.

Exemplification:

U.K.: Spodnie jeansy. To już mówiłam chyba. [The trousers – jeans. I think I've already said that.]

[UK1; T1]

(here: while describing the appearance of one of the persons shown in the photo)

There have been reports both of cases when the patient signaled that s/he already said something before but this actually did not happen, and the cases when s/he repeated the previously received information without being sure whether s/he already said so.

Quantitative characteristics of phenomena

Quantitative analysis was carried out, distinguishing repetitions classified in categories: A) normative phenomena – the subject describes the same objects or their features once again, at the same time indicating that this is secondary; B) non-normative: B1 – the subject describes the same objects or their features once again, in an uncontrolled, persistent way; B2 – the subject describes the same objects or their features, showing at the same time that s/he does not know what her/his earlier utterances were about (what s/he already talked about and what s/he did not).

The data on the occurrence of particular phenomena in successive samples of utterances (Sample 1 – description of a person; Sample 2 – description of a place; Sample 3 – description of a situation) are specified in Table 1.

Table 1. Occurrence of repetition; repetitions of phenomena categorized as A, B1, B2 (according to the characteristic of categories presented in the text of the paper).

Category	A	B1	B2
Sample 1			
In the total studied population	15.83%	37.50%	0.83%
mild-stage dementia	18.33%	30.00%	0.00%
moderate-stage dementia	13.33%	45.00%	1.67%
Sample 2			
In the total studied population	7.50%	34.17%	6.67%
mild-stage dementia	6.67%	21.67%	8.33%
moderate-stage dementia	8.33%	46.67%	5.00%
Sample 3			
In the total studied population	5.83%	25.00%	3.33%
mild-stage dementia	6.67%	18.33%	3.33%
moderate-stage dementia	5.00%	31.67%	3.33%

The data in Table 1 show that in the utterances of patients those most frequently found were repetitions categorized as B1 (the subject describes the same objects or their features once again, in an uncontrolled, persistent way) – regardless of the kind of descriptions, in all the studied samples. The least frequently reported were repetitions categorized as B2 (the subject describes the same objects or their features, showing at the same time that s/he does not know what his/her earlier utterances were about; what s/he already talked about and what s/he did not).

Taking particular kinds of descriptive answers, the persistent, uncontrolled repetitions were the most frequent concerning the description of a person (in ca. 37% of the subjects) and the description of a place (ca. 34%), and the least frequent those concerning the description of a situation (in 25% of patients). It should be also stressed that repetitions categorized as B2 extremely seldom appeared in

the description of a person or of situation – they were most often observable in the description of place.

The intensity of repetitions categorized as B1 (the subject describes the same objects or their features once again, in an uncontrolled, persistent way) in individual samples of the patient's utterance was additionally analyzed. Detailed data are presented in Table 2.

Table 2. Intensity of repetitions; repetitions of phenomena categorized as B1 – here: 0 – a phenomenon does not occur; 1 – it occurs once; 2 – twice; 3 – three times; more than 3 times (according to the characteristics of categories contained in the present text).

Category	0	1	2	3	More than 3
Sample 1					
In the total studied population	62.50%	23.33%	5.00%	3.33%	5.83%
mild-stage dementia	70.00%	20.00%	8.33%	1.67%	0.00%
moderate-stage dementia	55.00%	26.67%	1.67%	5.00%	11.67%
Sample 2					
In the total studied population	65.83%	13.33%	5.83%	5.00%	6.67%
mild-stage dementia	78.33%	11.67%	5.00%	0.00%	3.33%
moderate-stage dementia	53.33%	15.00%	6.67%	10.00%	10.00%
Sample 3					
In the total studied population	75.00%	13.33%	6.67%	1.67%	2.50%
mild-stage dementia	81.67%	11.67%	3.33%	0.00%	3.33%
moderate-stage dementia	68.33%	15.00%	10.00%	3.33%	1.67%

Multiple repetitions (twice, three times or more) were most often reported in descriptions of a place (in ca. 18% of patients), less often in descriptions of a person (ca. 14% of subjects), and the least often in descriptions of situations (in ca. 11% of subjects). The description of a place was characterized in some persons by a high intensity of uncontrolled repetitions (the same objects in the room presented in the photo were mentioned and/or characterized many times).

CONCLUSIONS

The analysis of the research material made it possible to establish that:

1/ All the distinguished categories of repetitions are present both in the utterances of mild to moderate Alzheimer's dementia patients. The most undesirable ones (the subject describes the same objects or their features once again, in an uncontrolled, persistent way) are the most common in both groups. At the same time, their intensity increases as the dementia process progresses (for example: in the description of a place there are more than twice as many repetitions in the utterances of moderate-dementia patients than in mild-dementia patients).

2/ Out of the studied types of descriptive utterances, the description of a place was one where most pathological symptoms were reported. While describing the room presented in a photo and the objects in it, the patients were particularly prone to uncontrolled repetitions; furthermore, the intensity of difficulties within one utterance was greater than in the case of other kinds of description. Moreover, the patients easily tended to forget whether they spoke about something earlier or not.

To patients with dementia, the realization of utterances in the form of description is difficult because they find it necessary to put the object-filled space in order. The same objects can be recalled again because of forgetting; ideational perseverations also frequently occur.

3/ If perseverations are seen as a defense mechanism in the situation of experiencing powerlessness (Olszewski 2008), then during rehabilitation activities the forms of stimulating the patients that could increase their occurrence should be avoided. When studying the properties of perseverations the following was pointed out: perseverations can be a phenomenon dependent on the type of task, but there is no evidence that they are a uniform phenomenon (Freeman, Gathercole 1966); the more mental effort a task requires, perseverations are the more likely to occur; inflexible behaviors are mostly visible when a task is difficult; (Eisenson 1954, cited after: Freeman, Gathercole 1966; Walsh 1998, 2001), a too difficult task may trigger perseverations of the set-shifting type (Goldstein 1943, cited after: Freeman, Gathercole 1966).

For that reason, descriptive utterances (or in particular: some of them/here: description of place/) will cause problems in many patients with dementia.

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