"¿Cómo te sientes? – With my butt!". Code-choice related humor in bilingual speakers living with Dementia of the Alzheimer's Type

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Abstract. This study investigates data from three narrative interviews held with people living with early- and mid-stage dementia of the Alzheimer's type (DAT) and their primary care partners speaking English and Spanish in informal settings; the analysis focuses on the humorous moves which are employed by the participants living with dementia in both languages. Drawing on the General Theory of Verbal Humor and the Cooperative Principle, this study sheds light on the conversational humor on a semantic (i.e., language-dependent) as well as pragmatic level (i.e., contextually situated) initiated by the people living with dementia in this dataset while investigating the interpersonal goals behind such moves. By analyzing the (intentional) humorous practices and their respective code choices, our aim is to gain a better understanding of the pragmatic abilities of speakers which are retained while experiencing communication challenges in the face of DAT. This study thus contributes with increased knowledge about people living with dementia as active conversational partners.

Keywords. General Theory of Humor; Grice's maxims; bilingualism; dementia; Conversation Analysis; Dementia of the Alzheimer's Type (DAT)

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1 Introduction

Within aging societies, the number of diagnosed dementias, such as Dementia of the Alzheimer's Type (DAT), is constantly on the rise and so is the number of bilinguals who are living with DAT[1] (cf. Plejert, Lindholm, and Schrauf 2017). Communication can pose many challenges for people who are living with DAT as well as for their conversational partners

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1. For reasons of space-restrictions many scholarly papers opt for the word efficient initialism PWD or PLWD. In an effort to validate voices from the community who are actively involved in research and their own represen-

(Hamilton 2019, 12–14; Wray 2021), due to the high dependence on contextual knowledge, cognitive resources, and emotional demands (Wray 2020, 185). Bilingualism adds another layer of challenge, but also of great opportunity in this communicative constellation. Previous studies (e.g., Müller 2017; Schneider 2022) have demonstrated positive communication outcomes when people living with dementia can draw on their entire linguistic repertoire in conversations and are not restricted to one code.

It is important to point out that social interaction and interpersonal connections are a vital part to the wellbeing and continued sense of self of a person living with DAT. With regard to that fact, Dowling (1997, 280) points out that "[the] mind-body connection is often seen as hinging on humor". Additionally, humor undoubtedly affects social interactions and shapes people's interpersonal bonds. Hence, it may be one of the many tools people have in their social arsenal to establish connections with others (Treger, Sprecher, and Erber 2013). Studies about humor and dementia have been largely conducted from a medical perspective (Clark et al. 2016), with so called altered sense of humor or lack of social filter at their center. As such, people living with DAT are often approached as a homogeneous and passive group, who are seen as controlled by the disease (Schneider and Bös 2019). The same holds for general perspectives on language use and code choice as it is suggested that people living with DAT are no longer in control of their language capacities. Instead, linguistic behavior is understood as symptomatic behavior (cf. ibid.) and humor simply is the unintentional result of such.

Humor is inherently a complicated social phenomenon which can be found in all cultures (Billig 2005). In that sense, just as different societies have different cultures, each culture has its own set of rules of what is appropriate and acceptable in humor, so the different sets of values and norms are reflected in the humor created by the respective societies (Lin and Tan 2010, 3). Although humor is found universally, there is no universal joke. In other words, what is amusing to some may not be amusing to others (Nevo, Nevo, and Yin 2001; Lin and Tan 2010, 7). The humor of a speech community often seems futile to outsiders, who lack knowledge of the linguistic and cultural conventions of said speech community. Native speakers of a language are expected to bend and break its rules to be playful and creative, which entail violations of the norms of language and violation of normal conversational maxims. As a consequence, socially taboo topics can more easily enter into discourse (Vaid and Pavlenko 2006).

This study investigates how humor, more specifically, language-related humor is created by bilingual people living with early- and mid-stage DAT in triadic conversations. The structure of this paper is as follows. The next section establishes the background of humor studies, the General Theory of Humor and the Cooperative Principle, and addresses the intersection of humor and dementia, all of which lay the theoretical foundations for our analysis. Following, section 3 introduces the data and methodology employed to conduct the analysis. Subsequently, section 4 presents the findings of the qualitative analysis of selected excerpts before section 5 elaborates on potential implications and provides an outlook for future research.

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tations in such, the author team has decided to follow Swaffer (2014)'s suggestions on person first language. For a discussion of dementia related terms of reference in academic publications see Bös and Schneider 2022.

2 Background

Humor possesses distinct characteristics that distinguish it as a special form of social interaction. It generates laughter and entertainment and serves as a bonding mechanism. People may utilize humor to express their views and ideas to attain specific outcomes, such as amusement or satisfaction (Pan 2016). Humor is also crucial for establishing and maintaining interpersonal connections. Whether it be intimate personal relationships with loved ones and friends or friendly and professional relationships with colleagues, humor is indispensable in creating 'intimate and genuine' bonds (Swartz 1995). It encourages feelings of unity, intimacy, and friendship (Almeida and Nunes 2020), ultimately creating a sense of community. Sharing humor can also challenge conventional norms and permit behavior beyond the norm (Norrick 2009). In addition, humor has the characteristic of being adaptable to various aspects of language and different perspectives (Pan 2016). Humorous speech not only exploits ambiguities and speech acts but also constructs a playful frame or 'play frame' in conversation (Bateson 1953). Through linguistic choices, this cognitive frame of a specific interactional situation can be opened to a different interpretation and compel interlocutors to reorient their understanding of the interactional sequence (Viana 2013, 221). Bilingual or multilingual humor often find their comedic effects when words or sentences in two (or more) languages have similarities and ambiguities at various levels of language (Nilsen 1981; Seewoester 2009, 3; Vaid and Pavlenko 2006).

The following sections first focus on the General Theory of Verbal Humor before outlining the cooperative principle of conversations and finally, discussing the intersection of humor and dementia.

2.1 General Theory of Verbal Humor

Humor can be analyzed in more detail using the General Theory of Verbal Humor (GTVH) which was coined by Attardo and Raskin as an extension to their previous Semantic Script Theory of Humor (Attardo and Raskin 1991). Attardo offers a general definition in which he defines humor as "[...] covering anything that is (or may) be perceived as funny, amusing, or laughable" (Attardo 2020, 155). The GTVH represents all aspects of humor from its abstract concept to the language and situation it occurs in. According to this theory, jokes can be categorized into six parameters, which are referred to as 'Knowledge Resources.' These parameters are arranged in a hierarchical and linear set of tools that examine various aspects of a joke, and each parameter corresponds to the degree of similarity perceived by the speaker (Attardo 2020, 138). These six knowledge resources are organized as follows: (1) the script opposition at the highest point in the hierarchy followed by (2) logical mechanism, (3) situation, (4) target, (5) narrative strategy, and (6) language. Given the focus on language and interaction in the present study, the central knowledge resources are (3) situation and (6) language. The situation represents all elements that build up the context of the joke, e.g., participants, room, dialogue etc., while language is concerned with the verbalization of the text and all the possible paraphrases of text.

As previously mentioned, the focus is on language-dependent humor. Therefore, it is crucial to analyze the ways in which humor is created in conversation and interaction. Language-dependent humor manifests itself through utterances with humorous meanings or double entendre. These jokes "find their humorous power through ambiguities apparent

in [...] language" (Seewoester 2009, 3). Ambiguity is a language device that is commonly used to create humor which can be further distinguished as lexical and syntactic (or structural) ambiguity. Lexical ambiguity refers to the presence of two or more meanings for one lexical item. This type of ambiguity often relies on homophones (i.e., two lexical items sharing the same phonetic realization), homonyms (i.e., two lexical items with coincidental shared formal similarity) and polysemes (i.e., one lexical item with multiple related meanings) (Kortmann 2020, 204). While the use of this language device creates a duality of meanings in a word, it does not change the syntactic structure when used in a sentence. Therefore, creating jokes with lexical ambiguity relies on the different meanings of a particular lexical item, rather than (extra)linguistic context.

In contrast, syntactic or structural ambiguity describes the presence of two or more possible meanings within a sequence of words. This form of ambiguity creates "a duality of interpretations motivated by the structural patterns of the language system" (Lew 1996, 128). As such, it can also be a source of confusion regarding the part of speech or the grammatical function of a particular word (Oaks 2010) which is where humor is established. A change in word class is also considered an overlap of lexical and syntactic ambiguity as the word class change occurs on a lexical level, but simultaneously exhibits different syntactic functions (Charina 2017, 122). Syntactic ambiguity does not only result in dual meanings of a sentence, but it also changes the structure; as a result, it creates two separate clause types, one for each meaning. In most cases, the decoding of syntactic ambiguity relies on (extra)linguistic contexts.

2.2 The Cooperative Principle and Humor

When discussing language in interaction, an important descriptive framework is Grice's 'Cooperative Principle' as it describes how speakers and listeners cooperate in communication to convey meaning (Grice 1975). The GTVH is based on the idea that humor arises when there is a violation of the Cooperative Principle, i.e., a violation of the set of principles that govern effective communication. The Cooperative Principle is an overarching principle under the assumption that all participants in communication are cooperative, i.e., actively working to ensure that their communication is effective and mutual. On the basis of this assumption Grice formulated the conversational maxims of quality (be truthful), relevance (be relevant), quantity (be brief and informative), and manner (be clear) (Grice 1975, 45-47). It is important to note that the conversational maxims are not to be understood as prescriptive but rather descriptive of how people ideally behave in conversations. However, the various ways in which a conversational partner may fail to fulfill a maxim are categorized as non-cooperation. Non-cooperation can take many forms, such as providing insufficient information (quantity maxim), being untruthful or misleading (quality maxim), going off-topic or providing irrelevant information (relevance maxim), or using language that is unclear or ambiguous (manner maxim). Non-cooperation can include unintentional violations due to miscommunication, misunderstanding, or lack of attention, as well as intentional violations of the maxims for humorous or rhetorical effect. It is important to note that forms of non-cooperation can be distinguished into antisocial, such as lying, and pro-social, such as humor (Attardo 2020). The GTVH relies on the principles outlined in Grice's maxims in order to explain how violations of communication norms, hence pro-social non-cooperation, can lead to humor by creating incongruity. According to Attardo,

"all humor is intentional either by the speaker or the hearer's side, i.e., someone has to intend (key/frame) the situation as humorous" (Attardo 2020, 175). Therefore, the violation of the Cooperative Principle in those cases does not intend to terminate the conversation or to inconspicuously lie, but to bring about a comedic effect with the sole (primary) intention of being funny and to generate laughter.

Grice distinguishes between violating and flouting a maxim. An interlocutor may covertly and unostentatiously violate maxims. This has a misleading and deceptive effect on the interaction, as is the case with lying which is a direct violation of the maxim of quality (Grice 1975). Flouting functions similarly to a violation but it is done in such an obvious manner that the interlocutor notices the flout and immediately interprets the utterance accordingly (Allott 2018). Nevertheless, it can be discussed whether humor is to be classified as either a violation or a flout. There have been a few authors claiming that humor is not a true violation. Goatly, for instance, presented a proposal in which he defines humor as a flout delayed by violation. He argues, "the breaking of the maxims must be recognized almost immediately, at least with the next couple of turns of the discourse for the joke to work" (Goatly 2012, 235). However, this implies that flouts caused by humor behaved differently from all other flouts. Specifically, they would not generate implicatures. Therefore, we understand humor to be a violation and per default non-cooperative, following Attardo who considers humor non-cooperative or non-bona-fide (Attardo 2020, 164). However, he supports Goatly's idea that the recognition of the violation has to occur very soon after the humorous utterance. It is also important to note that the interpretation of humor is guided by the maxim of relevance. This implies that humorous utterances, most likely, although not exclusively, entail a violation of the maxim of relevance (ibid.), which is indeed the case in the present study. As pointed out, humor is a social phenomenon and produces its effect through the speaker-hearer relationship. "Group humor tends to promote many good feelings including a sense of safety, a sense of belonging and social security–in a word, community" (Dowling 1997, 280). Group humor can be established in interactional sequences through humor support from the hearers and can take numerous forms, e.g., encouragement, rewarding the conversational partner through laughter, echoing the humor, or any strategy that shows heightened involvement by all parties (Hay 2001).

2.3 Humor and dementia

Across disciplines researching dementia, a strength- and ability-based, so-called non-deficit perspective is firmly established, promoting a positive, person-centered approach to care. Thus, this perspective is also found in linguistic research on dementia, which aims to understand language use and communication in individuals with dementia as complex and varied, rather than simply as a deficit or loss (see, e.g., Hydén and Antelius 2017). Yet, at the intersection of humor and dementia, many studies in a clinical context follow a deficit approach, identifying an "altered sense of humor" and suggest that potential "abnormalities of humor may be prominent in neurodegenerative diseases" (Clark et al. 2016, 111) such as DAT. It is documented that the pragmatic level of language comprehension is already affected as early as the beginning stages of DAT (Bayles and Tomoeda 1991), i.e., comprehension of irony and sarcasm might be compromised (Shakespeare 1998). However, "pathologizing behavior" (Dupuis, Wiersma, and Loiselle 2012, 162), i.e., understanding

humorous moves made by people living with DAT as unintentional, discards the complex interactional efforts made to build social connections.

We agree with Hickman et al. that mere biomedical perspectives on DAT do not leave room for the possibility that humor "remains valued and actively embraced" by people living with DAT (Hickman, Clarke, and Wolverson 2020, 1795; also see Mitchell, Dupuis, and Kontos 2013). As an exception within the clinical context, Hawkins and Graff-Radford point out the necessity for patients and families to focus on the retained abilities of verbal humor (Hawkins and Graff-Radford 2007). Interactional and pragmatic studies broadly focus on humor as a coping strategy for caregivers (e.g., Tan and Schneider 2009) or the effect of humor in dementia care. Davis et al., for instance, point out the dangers of unilateral teasing in care, but also the effective use of humor as conflict mitigation (Davis, Maclagan, and Shenk 2016). Further, laughter in conversational partners living with DAT is not always indicative of humor. As previous studies have found, laughter can serve as a substitute for verbal interaction and "an implicit device with the potential to deal with [communication] problems without drawing too much attention to them" (Lindholm 2008, 12).

Thus far only scarcely researched, is an account of humorous moves made by people living with dementia. Despite the fact that early publications (e.g., Saul 1988; Adasiak 1989) point out the value in humorous care interactions –home-bound or professional–, the majority of studies understand the caregiver to be solely responsible for creating such humorous moments. Regarding humor, especially in the later stages of the disease, people living with DAT are rarely seen as fully communicatively competent by others. They may, as Davis et al. state, still perceive themselves as conversationally competent and attempt to present competence and interest in social interaction to others–including humor (Davis, Maclagan, and Shenk 2016). However, that self-image may not be either expected or supported by their communication partners. As noted by Sabat (2005, 2008) conversational partners may attribute every action of a person living with DAT only to the disease, rather than taking into account the social persona of the person and their desire for interpersonal relations. Similarly, Lindholm and Stevanovic discuss trust in caregiving interactions and its effect on potential humor; if (humorous) turns are not just taken by face value, but rather seen as "evidence of the fundamental problem of the cognitive disorder" (Lindholm and Stevanovic 2022, 118), not the person, but instead DAT becomes the center of the interaction. The authors point out the interactional burden on the caregivers' side to enable meaningful conversations without solely carrying the burden for humorous interactions. Co-participants can effectively enable and participate in humor created by their conversational partner living with early- and mid-stage DAT when the trust in the existence of 'common ground' (Clark 1996) is given. This common ground can be defined as the mutual understanding of the social situation and is guided by cooperation (see 2.1) and what Lindholm and Stevanovic describe as the trust that non-cooperation is correctly inferred by the conversational partner, rather than attributed to DAT (Lindholm and Stevanovic 2022). It is not our intention to discard findings pertaining to changing abilities but rather, to focus on retained pragmatic abilities in social interaction and add to the growing body of research with the same aim.

3 Data and Methodology

3.1 Data Collection and Ethical Considerations

The corpus is composed of 24 audio-recorded narrative interviews conducted 2018 and 2019 in the State of Florida, US with bilingual people living with DAT and their primary caregivers. A questionnaire regarding the participant living with DAT's (language)biography accompanied the narrative interviews and was filled out jointly with all parties. Participation was voluntary and participants could end the conversation at any point for any reason. All participants were informed about the main research goal of gaining insights into bilingual language use in home-bound care in the context of dementia; notably this goal motivated participation, as many felt their bilingual identities and language use(s) were often overlooked in this context. Informed consent was obtained from all participants. Where applicable, the primary care partner with Durable Power of Attorney also co-signed the informed consent of the person living with DAT; however, every individual was actively involved in the consent giving process. Given that time is a limited and valued resource for family members and care partners (cf. Davis and Pope 2020, 39) the time and date was free of choice within a four-week period. Further, different locations were offered but, in most cases, the researcher was invited into the participants' home. Names, places, pets, and other specific identifying information was pseudonymized during the transcription process and are only known to the researcher and the transcriber, who signed a confidentiality agreement according to the regulations of the European Parliament on the protection of natural persons with regard to the processing of personal data and on the free movement of such data.

3.2 Participants

This case study focused on three individual English-Spanish bilingual conversations with Ana, Julio, and Elena who were between early and mid-stages of DAT at the time; they have had received an official diagnosis of probable DAT according to the DSM-5 (American Psychiatric Association 2013, 612–616), without the likelihood of further coinciding diagnoses. The three participants were sequential bilinguals (Baker and Wright 2021, 96) given their background through the Puerto Rican school system (Julio, Elena) and private bilingual school (Ana). Hence, they roughly share the manner and age of acquisition, i.e., between the ages of six and eight through formal instruction. Their individual language use varied greatly across domains and across their lifespans. As such, Julio indicated that he rarely conversed in Spanish and overall conducted most of his conversations in English. Ana and Elena, on the other hand, indicated that although their dominant language was Spanish, they frequently switched between languages in their day-to-day interactions. Their respective primary care partners who took part in the conversations also self-identified as bilinguals. The interviewer was multilingual and fluent in English and Spanish, their second and third language respectively. Table 1 provides an overview of the individuals living with DAT's linguistic and biographical information as shared in the questionnaire as well as details to the length of the conversation.

The conversation with Ana and her daughter took place at her home. Her daughter visits her daily before and after work and sometimes during her lunch break. A professional in-

Table 1: Biographies of participants living with dementia

	Ana	Julio	Elena
Biography			
Age	80	86	67
Heritage	Dominican	Puerto Rican	Puerto Rican
DAT stage (estimate)	mid stage	early stage	early-mid stage
DAT diagnosis (years ago)	13	1	3
Years of symptoms	18	2	7
Bilingual language mode	often	rarely	often
Dominant language	Spanish	English	Spanish
Duration of recording min:sec	37:52	23:03	88:41
Wordcount	3 657	2 034	9 156

house caregiver was also present, who remarked that Ana was in a particularly joking mood that day. At the time of the interview, she had been living with symptoms of DAT for 18 years, which mainly surfaced in the form of short and long-term memory loss. Physically still strong and active, she spends her days caring for her dog, playing games, or watching quiz shows on the television. While she has been studying multiple languages throughout her life, she now self-identifies as bilingual.

Julio agreed to the conversation at his adult day-care where a professional caregiver was present. The two share a very friendly and humorous relationship as reported by both and evidenced during the conversation itself. Julio, at the time of the recording, was very independent and lived by himself, spending his days at the daycare center, or going for long walks throughout the neighborhood. He claimed to rarely speak Spanish in his daily life, nevertheless, he estimated his language competences on the highest level.

Elena and her daughter have started living together after Elena's official diagnosis as a measure of long-term planning. While Elena is very independent, they both agree that she enjoys the company of her daughter and to share the burden of daily chores. Their relationship is based on mutual teasing and joking but characterized by respect and appreciation.

3.3 Procedure

For the analysis of the basic transcripts of the recordings we used the software MAXQDA (2022). The transcription conventions are listed in the appendix. The transcripts and translations in this study were aided by a group of transcribers whose L1 is Spanish to ensure inter-transcriber reliability. The transcripts include pauses, laughter, and non-verbal actions, while excluding variational linguistic features. The transcripts adhere to standard orthographic conventions of oral speech. Literal translations were used where possible, and idiomatic translations were used when necessary to capture the meaning. The cod-

ing procedure was carried out in three steps. First, language material was classified as either English, Spanish, or other language material as well as pragmatic noise (minimal responses, laughter, etc.). Second, the two authors and two additional coders tagged perceived humorous moments in the transcripts for inter-coder reliability. All coders formed part of the same 'comic culture' (Berger 2014, 68) as the participants of this study, i.e., they shared the social conventions regarding what is perceived as humorous. Third, to code for maxim violation, ambiguity, and humor responses, turns perceived as language-dependent humor were qualitatively analyzed for their situational frames and linguistic choices, including ambiguity.

4 Analysis

The analysis is structured into the following four subcategories: situated joking, ambiguity, style shifting, and callbacks. Situated joking refers to humor that is heavily dependent on the specific context in which it occurs, i.e., the meaning and effect of the joke can vary depending on the background of the participants, the physical location of the interaction, and the specific details of the situation. A device used for style shifting and bringing about ambiguities in two or more languages is code-switching. Vaid argues that "[t]he use of a particular code in discourse can signal not only how the utterance is to be interpreted but also information about the context and social identities of the interlocutors" (Vaid and Pavlenko 2006, 159). Code-switching can act as a tool that frames utterances and situations as humorous, allowing us to create language-dependent humor across language borders. The creativeness of bilingual humor production may emerge through word play and ambiguity, as they exploit syntactic similarities, i.e., in bilingual puns. Therefore, having knowledge and insight of a dual cultural and linguistic perspective expands the kinds of humor conversationalists can produce, identify, and appreciate. Humor through callbacks involves referencing a previous punchline, repeating a funny phrase or gesture that was previously funny or amusing (Jefferson 1973, 300). Callbacks can be especially effective in situations where the participants share a common cultural or social background and previous interactions.

4.1 Situated Joking

Excerpt 1 took place towards the end of the interviewer's (I) conversation with Julio. The caregiver (CG) had previously pointed out that it was lunch time and inquired whether Julio was planning to join the others in the dining area. Expectedly, the day care center served rather ordinary food along the lines of pasta, therefore, specialty dishes were untypical to be expected.

Julio violates the maxims of quantity by not directly answering the question what he is going to eat (T203) but instead stating that he did not see the menu as an alternative to a direct answer. He further violates the maxims of manner and quality the moment he suggests *steak* (T205), given that he knows that steak is generally not an option at this venue. His humorous move is supported in the form of rewarding laughter from both hearers, the caregiver and the interviewer, who are joining in and echoing the same joking element by responding *lobster* (T206, T207) –a dish that is just as unlikely as steak to be

		Excerpt 1 Daycare Center Lunch	
202	I:	What are you going to eat today? Do you know?	
203	Julio:	I don´t, know. I didn't-, I didn't see the menu.	
204	I:	So it's a surprise.	
205	Julio:	What is it, steak?	
206	CG:	Yeah, (laughing) lobster (all laughing)	
207	I:	(laughing) Lobster.	
208	Julio:	Wow, (inaudible)	

served in this setting. While it is important to point out that Julio might attempt to cover up the fact that he has forgotten what was offered that day by opting for a dish that is highly unlikely to be served, it also needs to be noted that this has no influence on the interpersonal outcome of the situation.

Excerpt 2 is taken from the beginning of the conversation with Elena and her relative (R) while all three conversationalists are sitting on the couch arrangements in Elena's living room. After the interviewer has introduced herself and explained that she speaks English and Spanish, Elena's daughter starts conversing in Spanish. Elena's reaction (T5) mocking the daughter for *trying being bilingual* prompts her daughter to remind her again that she, too, may speak in English or Spanish, however she 'feels most comfortable' (T10).

		Excerpt 2a Comfort	
5	Elena:	She's trying being bilingual, so–	
6	R:	**Ella sabe, ella te puede contestar y te puede de todo. Okay?**	*She knows, she can answer you and she can give you everything.*
7	Elena:	(chuckles)	
8	R:	**Eso mismo, tu no pienses que tienes que contestar– [todo en ingles–**	*That's right, you don't think you have to answer– all in English.*
9	Elena:	For myself o–]	
10	R:	**o contestar todo en español. Es como tú te sientes (.) más cómoda.**	*or answer everything in Spanish. How you feel most comfortable.*
11	Elena:	**Me siento cómoda todavía.**	*I already feel comfortable.*
12	R:	**Es que tú eres tan inteligente conmigo.**	*You are being smart with me.*
13	Elena:	(laughing) Can I translate–	
14	R:	She under- she understands.	

Contextually situated, it can be inferred that the daughter's indication of como tú te sientes más cómoda (T10) relates to Elena 'feeling' comfortable in either language. Elena, however, interprets *te sientes* 'how you feel' as *te sientas* and reacts to 'how she is sitting down' (T11), a meaning not intended by her daughter and thereby violating the maxim of manner. By replying *me siento cómoda* (T11) and implying the meaning of 'sitting down,'

Elena exploits the ambiguity of the conjugated verb form. In Spanish, me siento can indicate the first person singular in the present tense indicative of the verb *sentirse* 'to feel' or the first person singular in the present tense indicative of the verb *sentarse* 'to sit down.' As she reorients to the interactional sequence, her daughter rewards Elena with joint joking by remarking 'you are being smart with me' (T12). In her next turn, Elena seeks to translate her witty use of interpretation of the Spanish expression *te sientes* to ensure the interviewer is also in on the humor (T13).

		Excerpt 2b Comfort continued	
16	R:	Because when I say how you feel, **pues, cómo tu te sientes**, also in Spanish is more like how you sit.	*well, how you feel?*
17	Elena:	With my butt (snickering)	
18	R:	And she says with my butt.	

In Excerpt 2b, the relative quickly translates and explains the humorous exchange (T16), to the satisfaction of Elena who ensures that the interviewer is capturing the full extent of her joke by adding *with my butt* (T17) which is yet another violation, namely, of the maxim of quantity, as sitting usually is understood to involve someone's behind. In this example creation of humor relies on the context that Elena is, in fact, sitting and therefore both meanings could apply.

4.2 Situated ambiguity

Similarly, in the conversation with Ana and her daughter the extralinguistic context further complements the applied lexical ambiguity.

		Excerpt 3 Little	
230	R:	**Dime una historia. Ella quiere saber una historia de cuando tú eras chiquita.**	*Tell me a story. She wants to know a story from when you were little.*
231	Ana:	**¿Cuando era chiquita?**	*When I was little?*
232	R:	**Sí, cuando tú eras chiquita.**	*Yes, when you were little.*
233	Ana:	**Yo nunca he sido chiquita.** [(laughing	*I never was little.*
234	R:	(laughing)] **Cuando tú eras joven, más joven. Más joven porque tú estás joven todavía.**	*When you were young, younger because you are still young.*
235	Ana:	**¿Tú crees que yo soy chiquita?** (stands up)	*Do you think I am small?*

Ana's daughter asks her to tell a story from her childhood 'when she was little' (T230). The Spanish term *chiquita* can either be a diminutive form of the noun *chica* 'girl,' in

diminutive 'little girl,' or when used as an adjective *chiquita* means 'little' or 'small.' Notably, we can observe Ana preparing her joke by asking 'when I was little?' (T231) upon her daughter's request to talk about her childhood. By answering 'yes, when you were little' (T232) her daughter further strengthens the cognitive frame of childhood to which Ana prompts the readjustment of the interaction by drawing on the meaning of 'small' in the sense of height, claiming: 'she never was small' (T233). Her daughter's response is only minimally rewarding and barely acknowledges Ana's joke. Although she is laughing, she also quickly clarifies which meaning she implied by her question, emphasizing 'when you were young, younger' (T234). Ana, however, further elaborates her own claim by standing up and asking the interviewer whether she believes Ana is, in fact, small. In this situation the extralinguistic context is relevant, given that Ana is a very tall woman. Her height further strengthens her joke and the humorous understanding of *chiquita* as 'small' referring to her height.

4.3 Style-shifting

It has been reported (e.g., Bayles and Tomoeda 1991; Bös and Schneider 2021) by caregivers that with progression of DAT, the social filter becomes more permeable, i.e., topics and expressions (e.g., swearwords) might not be perceived as appropriate in certain situations by the interlocutors. Excerpt 4a, also involving Ana and her daughter, displays the effect of strategic style-shifting in order to play with the frame of appropriate register.

		Excerpt 4a Discomfort	
414	R:	**–no tengas dolor en (.) no sé donde te está doliendo. Que tú me dijiste esta mañana.**	*–don't have pain in (.) I don't know where it is hurting you. What you told me this morning.*
415	Ana:	**Que me duele el culo.**	*My butt hurts.*
416	R:	(laughing) **Mami!**	*Mami!*
417	Ana:	**Eso yo no he sido (.) lo que te digo entonces, la puerta de atrás.**	*That I have not been (.) what do I say instead, the back door.*
418	R:	**La puerta-** (laughing) **Ah mira, así se ve más bonito, así se ve más bonito.**	*Ah look, this way it sounds nicer, this way it sounds nicer.*
419	Ana:	(inaudible) **Le enseñé yo a ella lo bonito y lo feo.**	*I taught her the beautiful and the ugly.*

Linguistically tiptoeing around the subject at hand, her daughter tries to avoid the explicit mention of Ana's digestive problems by violating the maxim of manner in favor of maintaining an appropriate register and topic for the interview situation (T414). Ana, quoting herself by repeating back word by word what she most likely reported in the morning, readjusts the frame of appropriateness through her use of the explicit description 'my butt hurts' (T415). This shift in style prompts appalled laughter from her daughter who exclaims *Mami!* with false indignation (T416). Ana again shifts in style using the expression *la puerta de atrás* 'backdoor' and thereby violating the maxim of relevance, given that her

reformulation does not add any new information to the situation, and the maxim of manner by choosing a wordier expression (T417). Her daughter rewards her linguistic choice with approving laughter and the remark that the new expression sounds 'much nicer' (T418). Ana contextualizes both terms (*culo* as well as *puerta de atrás*) by emphasizing that she is teaching the interviewer both: the 'beautiful' and 'the ugly' of the Spanish lexicon (T419), thereby demonstrating her awareness for the different registers of the two terms and their respective appropriateness in the present interview situation. Note that the potentially inappropriate word choice (*culo*) is not causing the humor in this situation, but rather Ana's witty way of style-shifting in the following turns, which she continues in Excerpt 4b.

		Excerpt 4b Discomfort	
424	Ana:	**Entonces, (.) no puedo comer.**	*So, (.) I can't eat.*
425	R:	**Puedes comer, pero—**	*You can eat, but–*
426	Ana:	**No, porque estoy *estreñida*.**	*No, because I'm constipated.*
427	R:	**Así es, así es.** (chuckles) **Una persona fina**.	*That's right, that's right. A fine person.*
428	Ana:	**¿Quién?**	*Who is?*
429	R:	**Tú.**	*You are.*
430	Ana:	**Mira que *fina* soy yo.**	*Look how fine I am.*

In continuation of the prior style-shift, Ana proposes the term *estreñida* 'constipated' (T426), a violation of the maxim of relevance, because she is rephrasing what has already been formulated twice. Her tone of voice adds an additional layer to this maxim violation, emphasizing the humorous use of the term. Her daughter reciprocates Ana's tone of voice and not only echoes the humor, but further violates the maxim of quality by joint joking. She approves of the expression ('that's right, that's right') and compliments her as *persona fina* 'fine person' (T427) when Ana has just demonstrated in her previous turn that she is not necessarily a 'fine person.' Ana seems to recognize this violation of the maxim of relevance, reacting surprised and asking whom her daughter refers to (T428). After the reassurance that her daughter, indeed, referred to her, she takes up the reference and again plays with her tone of voice while mockingly exclaiming 'look how fine I am' (T430).

4.4 Continued joking through callbacks

The previous excerpts focused on style-shifting and linguistic humor within the same interactional sequence. However, once established, a punchline or joke can continuously appear, or be called back, throughout social interactions (Jefferson 1973, 300). In Excerpt 5a, Ana, her daughter and the caregiver are trying to establish which languages Ana has learned.

While it is apparent that Ana struggles to recall the languages she has learned – especially the fifth language – she exclaims by saying *mucha mierda* 'a lot of shit.' This expletive expression serves the function of a placeholder (Davis, Maclagan, and Amiridze 2010), i.e., taking the place of the to-be-remembered item, in this case the fifth language. The unexpected expression prompts the interlocutors (Ana's daughter, the caregiver, and the interviewer) to join her laughter (T22). The term itself is neither addressed nor commented

		Excerpt 5a Languages	
13	R:	She speak – she used to speak five languages.	
14		**¿Cuál era los cinco idiomas que tú hablabas, mami?**	*What were the five languages you speak, mami?*
15	Ana:	Spanish- [. . .]	
20	Ana:	Spanish, English (.) em, French (.) What's the other two? There's five, I don´t remember the other one.	
21	CG:	**Italiano?**	*Italian?*
22	Ana:	Italian- **y mucha mierda** (all laughing)	*Italian – and a lot of shit.*
23	CG:	**Y ahora, este- alemán**	*And now, this – German*
24	Ana:	**Alemán no. Alemán, spechen Deutsch, un poco.** (laughing)	*German, no. German, speaking German, a bit.*

on by the conversational partners. Instead, the caregiver inquires about German and the possibility of Ana speaking the interviewer's first language, which Ana negates (T24).

Shortly after, her daughter still tries to direct the conversation into a different direction by talking about Ana's former employer (Excerpt 5b). Ana, nevertheless, is still trying to recall the list of languages (T33). Again, she makes use of the placeholder which has elicited laughter from her conversational partners.

		Excerpt 5b Languages continued	
32	R:	Mr Robert, he was German, no? That´s how you learn German-	
33	Ana:	That was English, French, I like French. French is beautiful. I think so. (.) very light, very nice. Emm	
		(.) Spanish, English, **mucha mierda**	(.) Spanish, English, *a lot of shit*
34	R:	(laughing) Mami, **compórtate**.	Mami, *behave yourself.*
35	Ana:	(laughing) I´m sorry- (.) But, it´s true.	

This time, her daughter is the only one laughing, as the caregiver is occupied washing the dishes and the daughter's admonition *Mami, compórtate* 'Mami, behave yourself' (T34) discourages the interviewer to laugh along. As pointed out by Lindholm and Stevanovic, a situation like this can cause the conversational partners to question whether an utterance was intended to be funny and whether laughing is an acceptable and maybe even desirable

reaction (Lindholm and Stevanovic 2022). Mitigated by her laughter, Ana claims to be sorry indicating that she realizes the potential inappropriateness of the term (T35), yet adding but it's true after a brief pause, signaling that she, in fact, purposefully recycled this placeholder in her list of languages. A little later in the conversation (Excerpt 5c), the topic of language rises again, when Ana is uncertain whether the interviewer is able to understand English and a discussion about language arises.

		Excerpt 5c Languages continued	
145	Ana:	Do you speak English?	
146	I:	Yeah.	
147	Ana:	French? Italian?	
148	I:	(laughing) un petit peu de français	*A little bit of French.*
149	Ana:	Oh, un petit peu le français. Ah, I speak fine English and **mucha mierda**	*Oh, a little bit of French. Ah, I speak fine English and a lot of shit.*
150	R:	**Mami compórtate**…(laughing) (pause)	*Mami, behave yourself.*
151		**Pero** let's talk about-.	*But let's talk about*
152	Ana:	But I speak five languages so I have to say. **Mucha, mucha**-	*But I speak five languages so I have to say. Lots, lots-*
153	R:	So, I got three. English, Spanish, **mucha mierda**.	*So I got three. English, Spanish, lots of shit.*

Ana states that she speaks fine English and *mucha mierda* (T149) indicating that she purposefully uses the expression mucha mierda to establish profanity as part of her fluent linguistic repertoire. By contrasting *fine English* with profanity, she once more demonstrates her linguistic awareness of her own linguistic choices. Additionally, Ana violates the maxims of relevance and quantity as she circumvents naming all languages by using *mucha mierda* which results in her not being informative enough. Moreover, she also violates the maxim of manner as she uses the utterance ambiguously to showcase her linguistic awareness. In this sequence, her daughter laughingly reminds her again to 'behave herself' and tries to redirect the conversation after a short pause by changing the subject (*let's talk about-*, T151). However, Ana interrupts her to restate her knowledge of five languages. While she is starting to build up her joke again *mucha, mucha-* (T152) this time her daughter is the one who interrupts her by stealing the punchline and listing three languages *English, Spanish, mucha mierda* (T153).

The final interactional sequence (Excerpt 5d) in which Ana's knowledge of languages is discussed, is prompted by Ana herself who claims to *speak five languages* (T177).

In this excerpt the daughter is trying to co-construct the conversation, by asking questions you feel comfortable with all of them (T178) and expanding the list, when Ana signals need for conversational support (*there is another, there is another*, T179). Ana repeats her daughter's addition of Italian with the affirming interjection *yeah* (T181) and expands the list, yet again, with the expletive. In this final instance of her use of the placeholder *mucha mierda*, she does not receive any humor support. Instead, the daughter chooses to relieve

		Excerpt 5d Languages continued	
177	Ana	Oh and, I speak five languages also.	
178	R:	You can speak all of them. You feel very	
179		comfortable with all of them?	
180	Ana:	I speak Spanish (.) English, French **-hay otro hay otro**.	I speak Spanish (.) English, French– there is another.
181	R:	Italian-	
182	Ana:	Italian, yeah. **Y mucha mierda**	Italian, yeah. And a lot of shit.
183	R:	And you have knowledge of Portuguese.	
184	Ana:	Oh?	
185	R:	Yeah!	

the situation through the revelation of her fifth language: *you have knowledge of Portuguese* (T182). Ana's reaction in the form of the interjection *Oh?* (T183) is indicative of her difficulty to recall that she knows Portuguese as well and that *mucha mierda* was chosen as a placeholder, but also as a continuing device to elicit laughter from her conversational partners.

In humor through callbacks, timing is of great importance as the performance of a joke consists of certain elements that depend on the teller and the recipient: knowledge and understanding of "characteristic patterns of syntax and discourse organization in the areas of tempo, fluency and information flow" (Norrick 2009, 278). Ana effectively utilizes the placeholder *mucha mierda* by referencing it at the opportune moment, showcasing her skill in timing and language.

5   Discussion and Conclusion

The analysis has shown that people living with early and mid-stage DAT in this study employed linguistic choices in either language as a means to tell jokes that were contextually situated, relied on lexical ambiguity, contained style-shifting, or were recurring through callbacks. Speakers in this study each found themselves in a situation where their primary care partner and the interviewer, who was unknown to them, were present. The interplay between already established social bonds and still new, and to-be-established social bonds, was creatively manifested through humor. As previous research suggests (Lindholm and Stevanovic 2022), the trust in a common ground between interlocutors needed to be established for such humorous moves.

While humor in care, be it home-bound or professional, is quintessential to positive communicative and interpersonal outcomes, the responsibility of creating humor should be shared and not just that of the caregiver (Dowling 1997, 281). However, Lindholm and Stevanovic rightly point out that the interactional burden of assessing whether a situation is, indeed, humorous falls on the conversational partners (Lindholm and Stevanovic 2022).

The primary care partners in this study demonstrated high interpersonal awareness and communicative competence to enable and promote humorous utterances from their persons. In the conversation with Ana, her daughter was not always immediately providing humor support but cautioning her to 'behave herself.' Nevertheless, her daughter as well as the professional caregiver were overall very enabling of Ana's humorous utterances, even though these included profanities. When in doubt whether an utterance was intended to be humorous, they tried to redirect the conversation or join the laughter until Ana specified through metalinguistic commentary, that her style-shifts, for instance, were her ways of teaching the interviewer the full Spanish lexicon, including multiple registers (cf. Excerpt 4a). Her explicit mention of the directionality reveals that the interviewer was the intended receiver of the utterance and thereby her interpersonal goal was to establish a social bond. Joint laughter encouraged her to continue the use of the expletive placeholder in Excerpts 5a–5d.

Julio was able to present himself as a witty and active interlocutor, whose jokes the other interlocutors were happy to pick up on and continue. He intentionally broke with the playframe of the situation, namely the expected canteen food of the daycare center and chose a delicacy that was unexpected for the listener in this context.

Elena saw the opportunity to quip as her daughter repeatedly reminded her to be comfortable in her choice of language. As direct evidence of how comfortable she was with it, she used the ambiguity of the expression to her advantage, displaying not only linguistic knowledge of both languages, but also situational and linguistic awareness of humor. Particularly Elena's wish to translate her response in order to ensure the interviewer understood it, evidences her use of humor to establish a social relationship in which she positioned herself as a desirable and funny conversational partner. Following the GTVH, humor in this study was understood as pro-social non-cooperation of the Gricean maxims. The decoding of violated maxims showcased the humorous utterances in more detail, as they broke down the jokes into their individual parts which in turn supported the further analysis of how humor worked in the respective interactions. Maxims that were violated most frequently are the maxims of manner, quantity and, of course, relevance, as it is always linked to humor. The ambiguities within the individual jokes became apparent through the analysis of the violations of the maxim of manner. The maxims of quantity and relevance shed light on the reorientation of the interactional sequence given that, in this study, they were predominantly found in utterances relating to extralinguistic contexts. Yet, humor, as a complex social phenomenon, is difficult to capture by merely one tool. Even though the conversational maxims applied as an analytic tool in this study succeed at providing a useful starting point for conversation, the negotiation of humor can more succinctly be captured by including Leech's politeness maxims (Leech 1983) or Brown and Levinson's politeness theory (Brown and Levinson 1987).

In sum, this case study has demonstrated that bilingual settings provide the discursive space for bilingual people living with dementia to make intentional humorous moves in both languages, i.e., in the language or language mix of their choosing. They may find making jokes in one of their languages easier than in others, perhaps because there is less emotional baggage coined to certain topics or because they are more proficient or feel more comfortable in one of their languages which allows them to create more advanced humor (Vaid and Pavlenko 2006, 175–176). This in turn, enables Julio, Elena and Ana not only to portray themselves as communicatively active but also as witty and humorous as could

be shown through the analysis of maxim violation. Overall, the utterances presented in this study are accounts of intentionally created humor by people living with DAT. Further, the conversational partners living with DAT demonstrate their communicative competence through their complex linguistic choices, including lexical ambiguity, style-shifting, and callbacks, and foster social relationships through humor. The respective primary care partners, nonetheless, equally showcase their linguistic and interpersonal competence to enable multiple and even recurring humorous turns.

A limitation of our study is the use of basic transcripts, and the unfortunate lack of video material to account for extralinguistic features that indicate humor (such as winking, smirking, eye movements, and general gestures). Therefore, future research calls for a detailed multimodal analysis to investigate the complexity of these active humorous moves by people living with dementia.

Transcription conventions

Language Contrast	English
	Spanish
	<u>French</u>
(.)	Short (untimed) pause
wo:::rd	Sound stretching
-	(self-)interruption
[	Beginning of overlap
]	End of overlap
(non-verbal)	Non-verbal behavior

Free English translation in italics.
The interviewer, cargeivers, and relatives are abbreviated I, CG, and R respectively.

Ethics statement

This study introduces three cases from data that was collected by the first author in the context of a larger project with approval from the Ethics Committee of the University of Duisburg-Essen (filed under 18-7991-BO).

Conflict of interest

The authors have no conflict of interest to declare.

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