

Old-age language variation and change: confronting variationist ageism

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Abstract

The speech of older adults (65+ years old) is a rich resource for a wide range of researchers, including oral historians, developmental psychologists, health communication scholars, speech and hearing specialists, and discourse analysts. Yet in variationist sociolinguistics – the study of language variation, language change, and their social motivations – older adults have fallen afoul of a kind of scholarly ageism. Often consigned to the status of a historical benchmark against which the speech of younger people is compared, and with only rare acknowledgment of their biological, psychological and social diversity, old-age speakers deserve greater attention. This article provides linguists with an overview of relevant conceptualizations of age and ageing in gerontology; explains why a focus on older speakers is critical to the advancement of the study of language variation and change; and offers practical suggestions for overcoming some of the challenges associated with old-age research.

Key words

age, ageing, old age, later life, language variation, language change, sociolinguistics

1. Older adults: the invisible age group in variationist sociolinguistics

Across the globe, the older share of the population is growing rapidly. By 2050, the proportion of individuals aged 65+ is projected to rise to 17% globally and to at least 21-28% in Western industrialized countries (He et al. 2016: 4-5; Ortman et al. 2014). Appropriately, there have been growing signs of interest among sociolinguists in older adults' language use. The establishment in 2014 of the CLARe ('Corpora in Language and Aging Research') network is one such indicator. Yet despite this welcome development, Coupland et al.'s (1991:viii,2) observation from more than 25 years ago still resonates: older adults are largely invisible in sociolinguistics (see also Bowie 2011:29; Eckert 1997:159,165; Llamas 2006:72).

This invisibility is especially acute in *variationist sociolinguistics*, the paradigm concerned with language variation and change. Variationists' key aims of explaining the social meaning of language variation (Eckert 2000, 2008) and identifying principles of linguistic change (Labov 1994, 2001, 2010; Weinreich et al. 1968) have focused attention on

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the early life-course.¹ The socially turbulent (pre-)adolescent world provides a naturally rich context for exploring how language variation is exploited for social meaning-making and how language change in progress is advanced across successive generations (e.g. Eckert 1989; Labov 2007; Mendoza-Denton 2008; Tagliamonte and D'Arcy 2009). The later life-course has rarely been the central focus of variationist activity, no doubt because of widespread associations of old-age language variation with decline rather than choice (Coulmas 2013:72)² as well as longstanding assumptions about post-adolescent linguistic stability (Bailey 2002:320; Chambers 2009:197).

Although these assumptions have been challenged in recent years (see Section 3.2), variationists continue to value older adults principally as a window into the linguistic past (see also Coupland 1997:29, 2001:186,203; Llamas 2006:72).³ Older adults are studied almost exclusively in comparison with other age groups in apparent-time (cross-sectional) studies. Based on the above-mentioned assumption that the core of older adults' vernaculars will have remained largely stable since their youth, apparent-time studies infer evidence for change in progress from cross-age differences in language use (Bailey et al. 1991; Cukor-Avila and Bailey 2013). These studies tend to treat older adults as a relatively homogeneous mass of people, differentiated by broad social factors considered relevant for identifying the existence and direction of ongoing language change (e.g. sex, class, ethnicity). Its change agenda has rendered variationist sociolinguistics blind to the rich heterogeneity of old-age populations and the possibility that older adults' language use may differ along criteria that are not typically factored into apparent-time sampling design due to their lack of relevance for younger age groups. Moreover, because the apparent-time framework requires us to assume old-age linguistic stability, it unwittingly associates old age with sociolinguistic *non*-development (Coupland 2001:191), and ignores the possibility that some older adults'

¹ We employ the term 'life-course' rather than 'life-cycle', in line with current social science norms. A 'life-cycle' perspective assumes that individuals progress from childhood to old age in an orderly and linear manner, determined by chronological age and socio-cultural norms. By contrast, a 'life-course' perspective acknowledges that individuals' biographies are diverse and discontinuous, shaped by personal choices and socio-historical context. (See further Bengtson et al. 2005; Elder 1975; Hunt 2005:7-23.)

² A major research focus in developmental psychology has been to explore how healthy ageing (i.e., ageing marked by preserved physical, cognitive and social functioning) and pathological ageing (i.e., ageing marked by physical and cognitive pathologies such as stroke or dementia) affect older adults' language and communication skills (see, *inter alia*, Burke and Shafto 2004; Caplan and Waters 2006; Kemper 2015; Kemper and Lyons 1994; Korpiaakko-Huuhka and Klippi 2008; Light 1993; Nicholas et al. 1998; Thornton and Light 2006 for detailed overviews of relevant findings). This research tends to compare aphasic or cognitively impaired older adults' performance in experimental tasks with that of healthy older and/or middle adults, leading to the unfortunate consequence that any inter-group differences tend to be described in terms of healthy and non-healthy older adults' degeneration and decline in linguistic competence. (This is not to deny the great value of this research which has, for example, identified language behaviours that can facilitate the early detection and differential diagnosis of dementia (e.g. Delbeuck et al. 2013; Orange et al. 1994).)

³ This observation applies to apparent-time research discussed below as well as to investigations of relic dialects (e.g. Tagliamonte 2013, 2016). Unlike apparent-time studies, relic dialect studies approach older adults from a non-comparative perspective. However, this is to recover from their vernaculars earlier stages in the development of linguistic variables rather than to explore old-age language use *per se*.

vernaculars may change in response to socio-psychological and other changes experienced during later life.⁴

Coupland (2001:191-193) suggests that the dominant variationist treatment of older adults as stable and fairly homogeneous diachronic data repositories may – however unintentionally – reflect ageist stereotypes of older adults being ‘set in their ways’ and out of touch with current practices.⁵ Certainly, the widespread neglect of older people in variationist sociolinguistics is incompatible with the socio-demographic trends outlined at the beginning. A demographic that will soon constitute about a quarter of the Western industrialized population must not be consigned to the margins of variationist activity. Nor should we neglect older people in variationist studies of non-Western and non-ageing populations. In this paper, we therefore call for the full integration of older adults into the variationist research agenda.

We first outline insights from gerontology, the multi-disciplinary study of ageing, which underscore the complexity of age and ageing as well as the extensive heterogeneity of the old-age population (Section 2). We then explain how research that explores older adults’ language use in its own right and is informed by gerontological theories can expand our understanding of the social indexicality of language variation and enhance the accuracy of models of language change (Section 3). There follows a discussion of some of the challenges – but also opportunities – that we might face in studying old-age language variation, with some practical suggestions for overcoming them (Section 4). We conclude by reiterating our appeal to more frequently give older adults centre stage in variationist sociolinguistics (Section 5). Although our focus is on old age, our discussion is relevant more widely. We review notions of ‘age’ and ‘ageing’ which are applicable to the entire life-course; call for the examination of new sociolinguistic predictors of language variation and change; and describe methods that may benefit the variationist study of any age group. For clarity, we instruct the reader where our discussion is relevant more widely, and where our recommendations can (or should) be applied to the variationist analysis of any age group.

Before we proceed, however, we must set out our definition of ‘older adults’. On the basis that the majority of people experience significant changes in physical and cognitive functioning around the ages of 60 to 65 (Stuart-Hamilton 2012:17), and that in most Western industrialized economies the retirement age is presently between the ages of 59 and 69 years old (average 65) (OECD estimates, 2009-2014), we take the age of 65 as the onset of old age and include under the label ‘older adults’ individuals aged 65+ years.⁶ We explain in the next section, however, why this definition is one of expository convenience only, and why it is necessary for variationists to fully unpack what it means to be ‘old’.

⁴ The same bias is inherent to variationist longitudinal studies that have collected speech data from older adults across multiple time-points (e.g. Cukor-Avila 2000; Labov and Auger 1993; Nahkola and Saanilahti 2004). They have generally been devised to test hypotheses about old-age stability rather than to explore old age as a developmental life-stage.

⁵ This is not to say that variationists have been completely unaware that there is the potential for greater social heterogeneity and diachronic instability among older adults than apparent-time models acknowledge (see, for a very early example, Labov 2006[1966]:201). We simply call for this awareness to be more actively translated into new research practices.

⁶ We acknowledge the Western bias of this definition, which we address further in Section 2. Readers are referred to Victor (1994:8) for non-Western views on the commencement of old age.

2. Age beyond numbers: the complexity of age, ageing and old age

The widespread employment of the apparent-time method has arguably perpetuated an impoverished notion of age and ageing in variationist sociolinguistics (Coupland 2001:187-190, 2004:71-74). As pointed out in Section 1, apparent-time studies assume post-adolescent linguistic stability in order to infer ongoing change from quantitative linguistic differences observed across community members of different ages. To ensure sufficient data ratios, individuals are categorized into age clusters, overwhelmingly based on individuals' chronological age, i.e., their age in years since birth. While methodologically expedient, this approach assumes homogeneity (linguistic and otherwise) of individuals with(in) the same chronological age (range). It also implies that ageing is but a linear accumulation of years lived.

Yet gerontologists have long argued that age and ageing are not numbers games where individuals transition uniformly through successive life-stages. Ageing, across the life-course, is a multi-faceted process that involves changes in the biological (i.e., physiological systems such as the nervous, muscular or sensory systems), the psychological (i.e., mental functions such as memory, attention, perception, emotion) and the social (i.e., social roles such as teacher, neighbour, grandparent) (Birren and Loucks 1981:849; Boden and Bielby 1986:73; Ferraro 2007:30; Smith and Gerstorf 2004). Crucially, the ageing process is individualized, accumulative and unequal: different facets of ageing affect individuals at different times, to different degrees and in different ways, and inter-individual disparities increase with age due to the cumulative effect of earlier life experiences shaped by socio-economic inequalities (e.g. Dannefer 1988, 2003; Hunt 2005; Smith and Gerstorf 2004; and contributions in Cann and Dean 2009).⁷ Moreover, the experience of ageing is shaped by unique historical events unfolding during individuals' lifetimes (e.g. Bengtson et al. 2005; Mayer and Wagner 1993), and by the specific cultural contexts in which they live. For example, in industrial and/or Western societies, respect for old age is typically low, in contrast with the dignity it is accorded in some other cultures (Powell and Hendricks 2009:85). Age-segregated housing for the elderly is also a largely Western phenomenon, creating environments in which old age may be constructed in ways that are distinct from those found in the wider community, or indeed in other cultures (Keith 1980:343-344).

In order to reflect the complexity and heterogeneity of ageing, gerontologists have proposed indices for measuring individuals' age that transcend the limitations of chronological age. For example, Birren and Renner (1977:4-5) differentiate between individuals' biological age ("present position with respect to [their] potential lifespan"), psychological age ("capacity for adaptation to environmental change"), social age ("roles and social habits") and functional age ("relative abilities to perform capably within multiple contexts"). Rubin and Rubin (1986) propose a measure of life-position that incorporates six inter-related dimensions: physical health, interpersonal interaction, mobility, life satisfaction,

⁷ Social and biomedical theories of ageing abound. For overviews of social theories of ageing, see, for example, Ferraro (2007), Lynott and Lynott (1996), Powell and Hendricks (2009) or Victor (1994:Ch.1-2). For overviews of biomedical theories of ageing, see, for example, Medvedev (1990) or Viña et al. (2008).

social activity, and economic security.⁸ The sociolinguistic literature acknowledges the complexity of age and ageing as well as the intrinsic value of these broader perspectives on age and ageing (e.g. Bowie 2011:47, 2014:519-521; Cameron 2011:208; Cheshire 2006:1552; Coupland 1997:34; Coupland and Coupland 2001:469; Eckert 1997:154-158; Hamilton 1999:6-7). Yet, with the exception of Rose (2006), which we describe in Sections 3.1 and 4, they have not actually gained wide application in the field.

Some variationists have been careful to situate their research within the history of the speech community, thereby recognizing that language use is shaped by socio-historical context. Dubois and Horvath (2000), for example, group their Cajun American informants into three age groups based on their experience of national and regional events relevant to language choice and to sociolinguistic identity, such as the 1922 Education Act banning languages other than English from school, and Louisiana's adoption of official French-English bilingualism in 1968 (see also Dodsworth and Kohn (2012) for a similar approach in Raleigh, North Carolina). On the whole, however, variationist studies rely on chronological age to group adult individuals, in particular by life-stages (adulthood, retirement) (e.g. D'Arcy 2007; Naro and Scherre 2013), or decades (e.g. Labov et al. 2006; Tagliamonte 1998).

As acknowledged *inter alia* by Bowie (2014), Cameron (2011), Coupland et al. (1991) and Eckert (1997), narrow conceptions of age and ageing are problematic for variationist investigations of language use. They ignore the individualized, multi-faceted and cumulative nature of the ageing process noted above. Any given sample of individuals drawn at a specific time-point for an apparent-time study will be characterized by considerable inter- and intra-age group variability with respect to biological, psychological and/or social factors; due to the cumulative effects of differential ageing, inter-individual variability with respect to these factors may be especially pronounced in the late life-course (compared to the early or middle life-course). For example, a sample of older adults may be diverse in terms of individuals' physical, psychological and emotional well-being (Stuart-Hamilton 2012; Viña et al. 2007). Some older adults may experience pain, chronic illness, loneliness and/or depression affecting their quality of life and lifestyles. Others may experience deterioration in their motor and sensory functions and/or a decline in working memory capacity affecting their independence, participation in social activities, and living arrangements. The sample may also differ with respect to the size, quality and types of individuals' social networks, meaning that some may regularly participate in diverse and satisfying interactions while others do not (Hamilton 2001:570). Equally, samples drawn for longitudinal panel studies, which collect speech data from individuals across multiple time-points in order to test the stability of individual vernaculars, will show intra-individual variability along these factors (Hamilton 1999:3, 2001:579). For example, older adults' lifestyles may change over time due to declining physical or cognitive health, or their social networks may change when they move to residential care homes or experience the deaths of their spouse, relatives and friends. Younger individuals, of course, may also vary across some of these factors (e.g. in terms of well-being or social participation, though maybe less so in terms of working memory

⁸ See also Barak and Stern (1986) on subjective age; Charles and Carstensen (2009) on emotional age; Elder (1975) on historical age; and Stuart-Hamilton (2012:33-34) on different 'exemplars' of biological age.

capacity). It is therefore unrealistic and misleading to consign older adults – or individuals at any other life-stage – to an internally homogeneous, undifferentiated ‘bucket category’.

Chronological age, then, is a poor measurement of older (and younger) individuals’ stage in, experience of and progression through the ageing process; it is inadequate to reflect the fundamental heterogeneity of the old-age (or any other) population as well as the potential instability of the older (and the younger) individual; and, as pointed out elsewhere (Pecchioni et al. 2004; Rubin and Rubin 1986:27), it is a poor explanation for behaviour. It may even be of little relevance in cultures in which social rituals mark the onset of new age-based categories (Cheshire 2006). These limitations are widely acknowledged in the variationist literature, and there is some consensus that efforts to enhance current understanding of language variation and change crucially depend on adoption of an adequate approach to conceptualizing age that is sensitive to the multi-faceted and culture-specific nature of the ageing process outlined above, and able to reflect intra-age group heterogeneity in a range of global societies (e.g. Bowie 2011:30; Eckert 1997:154-158; Williams and Coupland 1998:140-143). Our paper highlights the urgency of concentrating these efforts on the old-age population, and we explain in the next section why they would benefit the overall variationist sociolinguistic enterprise.

3. Listening to older adults: key reasons for studying old-age language variation and change

Individuals of all ages employ linguistic variability for social purposes. Their lexical, morphological, phonetic and other linguistic choices (conscious and unconscious) allow them to react appropriately to interlocutors, situations and topics, and to constitute their identities; also, they reflect individuals’ participation in language changes sweeping through their communities over time. Yet our understanding of how and why old-age speakers select sociolinguistic variants is still poor, and is hampered by a narrow perspective on age and ageing, as noted in the previous section. Without a broader view, we risk overlooking the possibility that older adults’ language use may vary along criteria, experiences and changes that are relevant or even exclusive to the later life-course (see Section 1). We would then persist with a limited account of how sociolinguistic variation is meaningfully deployed, and how it in turn links to language change over time.⁹

3.1. The social meaning of language variation in old age

Older adults may differ from younger individuals in terms of their use and perception of the social meanings indexed by linguistic variation. Eckert (2008) describes sociolinguistic variants (e.g. alveolar nasal [ɲ]) ~~as being~~ **fully released [t]** as being social meanings (such as ‘educated’, ‘emphatic’, ‘working-class’) that are accessed and

⁹ While our focus in this section is squarely on outlining the need for and benefit of more in-depth variationist studies of old age, we recognize the importance of extending variationist attention to middle adulthood (see also Eckert 1997:165). Similar principles apply. Variationists need to: identify (through ethnography, cross-disciplinary collaboration or other means) the biological, psychological and/or social factors that diversify members of this life-stage (see, for example, the contributions in Willis and Reid 1999); and operationalize for quantitative analysis those factors that may be especially relevant to this group’s social use of language variation and (non-)participation in ongoing language change (see further Section 4).

activated by speakers and listeners. While some meanings in these indexical fields – such as the evaluation of [ɪ] – as sounding less educated than [i] communities, other meanings may be specific to certain social groups at a given point in time. Fully-released [t], for example, can index ‘articulate’ in the US English speech community generally, but also ‘Orthodox Jewish boy’ or ‘nerd girl’ in communities in which those are relevant social constructs (Benor 2001; Bucholtz 2001). Speakers exploit these indexical meanings to symbolically construct their personal styles and momentary stances; listeners interpret them. Alas, we know little about how older adults use sociolinguistic indexicality as a symbolic resource, or how they in turn perceive indexical meanings. Yet this information is essential for understanding generational language change, such as when a variant’s indexical meanings shift over the generations, prompting a rise or fall in its frequency over time. There are also implications for the study of language change over the lifespan since the social meanings of a variant may shift for individuals as they age. Using longitudinal data from a sample of Philadelphia students, for example, Wagner (2012) found that the local ‘Irish’ indexical meaning of [ɪr] weakened when the students transitioned from high school to the broader speech community of college. In addition to illuminating processes of language change, a focus on older adults’ linguistic style will also advance the study of sociolinguistic meaning in its own right, not least because it is an enterprise that has thus far been dominated by studies of youth.

To address this imbalance, we must ask: how do older adults linguistically construct and constitute their age-based identities? How are intersections between their age-based and other identities (e.g. sex, class, ethnicity, community of practice) indexed by patterns of linguistic variation? How are linguistic variants produced by older adults perceived and evaluated by listeners of different social backgrounds and ages? And how do older adults attend to sociolinguistic variation, as it is produced by both contemporaries and others? (See also Cameron (2011:214-215) for an expanded discussion of these questions.) Crucially, much of this work will require variationists to resist an etic, analyst-centred view of older adults’ social worlds. Instead, we should foreground older speakers’ own experiences of their lives, thereby allowing their own views of their identities to emerge. As Estes et al. (2003:26) have observed, “age is increasingly seen as a key factor in identity building, which interacts with and in certain circumstances becomes the determining factor in how people perceive themselves and others.” If this is the case, then we must be especially careful to ensure that we know what dimensions of their social identities and what aspects of age and ageing speakers themselves find meaningful. An individual’s chronological age may be of little relevance to their sense of self, which is why variationists must embrace the conceptualizations of age and ageing advocated in Section 2, and investigate whether age-based identities vary as a function of how they intersect with an individual’s other identities.

Additionally, we can look to our colleagues in discourse analysis, who have already blazed this trail. Social constructionist or practice-based approaches in discourse analysis are grounded in theories that view age and ageing as symbolic constructs (e.g. Gubrium and Holstein 1999; Phillipson 1998). These approaches recognize that age identities are flexible, fleeting and context-dependent, and that they intersect with other identities (see further Georgakopoulou and Charalambidou 2012:38-39; Pecchioni et al. 2004:171). Their aim is to explore how individuals discursively and interactionally construct, negotiate and define age

identities (see, for example, Coupland et al. 1991; De Fina and Georgakopoulou 2008; Nikander 2009). Kielkieiwicz-Janowiak (2011), to give just one example, interviewed Polish adults aged 65+ in order to explore how they discursively define (old) age. Her discourse analysis revealed that the following were relevant for categorizing someone as old: lacking intellectual and emotional agility, being dependent on others in terms of daily living, and being retired.

To our knowledge, there is only one variationist study to date that has grappled with questions of how older adults use patterns of language variation (beyond discourse) to construct their situated age identities. Over the course of almost a year, Rose (2006) was a participant-observer in a community centre for older adults in a small Wisconsin rural town. She combined ethnography with a quantitative variationist analysis of two linguistic features (monophthongal BOAT, stop variants of /ð/) in the speech of 45 interviewees. Rose found that although the distribution of these variants was conditioned by macro-social factors such as sex, they also carried meanings that were specific to these older adults and the communities of practice that they formed and re-formed at the centre. Stop variants of /ð/, for instance, locally index German ethnicity, farming, hard work, less education and male gender identity. Additionally, however, they were associated with certain communities of practice at the centre, such as bingo players. Bridge players, whose game was viewed at the centre as more feminine and refined, used stop variants less frequently. Rose's (2006:2) research thereby emphasizes that older speakers are not just reproducers of past variation: "they are producers of social meaning in the present." As such, we should endeavour to conduct more studies of older speakers' stylistic choices. This will further our understanding of sociolinguistic meaning in general, but also help to situate old-age variation within processes of language change, the topic of our next section.

3.2 Modelling language change in and beyond old age

As noted in Section 1, explaining the social meaning of linguistic variation is only one of variationist sociolinguists' two major research goals. It intersects with the other goal: to understand the mechanisms underlying language change in progress, i.e., adjustments made over the generations to the dialect or language spoken in a community (Labov 2001). In this domain as well, a greater and more nuanced effort to explore old-age language use will have important ramifications for the refinement of theoretical principles.

Perhaps the most important of these ramifications is the potential to enhance the interpretation of 'apparent time'. As already noted in Sections 1 and 2, the major methodological tool that variationists have used to study change in progress is the apparent-time construct. Undergirding this construct is the working assumption that older speakers preserve the vernacular of their youth, thereby serving as a stable historical reference point. Comparison of this benchmark with the speech of younger speakers in cross-sectional samples is the first step in uncovering a possible language change. Yet apparent-time interpretations will under- or over-estimate the rate of community change if post-adolescent stability cannot be taken for granted (Sankoff 2013:274). Longitudinal studies of individuals suggest that a minority do indeed make adjustments to their vernaculars (see Sankoff 2013 for a review). Nonetheless, we cannot accurately assess the degree to which the utility of the apparent-time construct is affected, given the limited longitudinal evidence-base available at

this time. Particularly relevant to our discussion is the fact that this evidence derives largely from speakers entering young or middle adulthood (e.g. Rickford and Price 2013), not old age. Currently available longitudinal research on older adults is limited to case studies of public figures (e.g. MacKenzie 2017; Reubold and Harrington 2017; Shapp et al. 2014), and to small reference groups in larger speaker samples (e.g. Buchstaller 2015; Gregersen et al. 2009; Naro and Scherre 2015; Sankoff and Blondeau 2007; Wagner and Sankoff 2011). In either case, there is the difficulty of generalizing over small numbers of speakers, as well as a lack of detailed relevant biological, psychological and social information of the kind described in Section 2. This means that important potential factors affecting linguistic lability in later life have not – or could not have been – identified or controlled for. If these factors are not clearly dealt with, they will continue to present a fundamental challenge to the design and interpretation of cross-sectional studies, and especially to the use of the oldest speech community members as historical baseline or reference group.

What complicates matters is a prevailing view in variationist sociolinguistics that older adults with noticeable physical deteriorations (e.g. age-related hearing loss) or age-associated pathologies (e.g. cognitive impairment) should not be included in apparent-time studies of ongoing language change or real-time studies of post-adolescent linguistic stability (see, for example, Bowie 2015:42; Labov 1994:46,102). The reasons are understandable: hearing loss and, for that matter, muscle atrophy may impact auditory acuity and articulatory accuracy, which can affect acoustic measurements and impede comprehension between interviewer and participant (e.g. Fox et al. 1992; Harrington et al. 2000; Reubold and Harrington 2017); and pathological cognitive decline may affect otherwise robust patterns of language variation. Hesson and Pichler (2016), for example, found that, in cognitive impairment consultations, older adults with dementia did not exhibit the usage patterns previously reported for ‘I don’t know’ in ‘healthy’ populations of all ages; a strong correlation of phonetically full variants (*I don’t know*) with referential meanings (i.e., to signal insufficient knowledge) and of phonetically reduced variants (*I dunno*) with pragmatic uses (e.g. to signal epistemic uncertainty, turn-exchange, topic closure, etc.) was absent in this population.

The fact remains, though, that as they age, individuals inevitably experience deteriorations in sensory and motor functions, and that ageing predisposes individuals to conditions such as aphasia and dementia (see Stuart-Hamilton 2012 for an accessible but fairly comprehensive overview of ageing-related biological and neurological changes). Contra Bowie (2015:42) and Labov (1994:46,102), we therefore argue against the blanket exclusion from variationist research of older adults with noticeable physical deteriorations or ageing-related pathologies. If these individuals are excluded from variationist studies of older adults, samples will not be representative of the broader old-age population (see also Bayles and Kaszniak 1987:225), and studies risk producing incomplete or inaccurate descriptions of old-age language use that will have implications for apparent-time interpretation. Rather than being obstacles to exploring old-age language use, we believe – with Cameron (2011:208) – that these individuals present an opportunity to enhance current models of language variation and change, provided that we are careful not to generalize their results across all older adults, non-healthy and healthy.

Additionally, older adults may experience social circumstances that are especially common in later life and that may impact their participation in language change. Labov

(2006[1966]:201) pointed out that one strong disrupting influence on adult vernacular stability is contact with younger speakers, from whom older adults might acquire new variants, or new frequency levels of existing variants. Given the heterogeneity of old-age social networks alluded to in Section 2, it is unlikely that isolation from such contact obtains for all older speakers (as Labov himself foresaw). If we do not anticipate that some older speakers accommodate to the speech of their younger acquaintances or family members, we may underestimate the rate of community language change. If we follow gerontologists in acknowledging – and ultimately operationalizing – the multi-faceted nature of the ageing process, we can advance toward actually teasing apart the effects of biological, psychological and social factors on old-age language variation and change, and improving current models of language change. In doing so, however, we must also take care not to focus solely on factors that are especially relevant to old age.

Macro-level factors routinely included in variationist studies, such as gender, ethnicity or social class, must be considered as dynamic over the lifespan (Wagner 2014). They may take on new meanings and intersect in new ways as individuals grow older. In his analysis of three stable variables (intervocalic (d), word-final (s), direct quotation strategies) in Puerto Rican Spanish, Cameron (2005) found a high degree of sex-differentiation in early childhood, the teenage years and retirement, and low degrees of sex-differentiation in the middle years (working life) (see also Edwards (1992) for similar results in inner-city Detroit). Cameron argues that in later life, it is the presence of both age- and sex- segregation that triggers the expansion of quantitative linguistic differences between sexes relative to middle groups. By contrast, Keith (1980) observes that in old-age communities (e.g. retirement or care homes), sex roles may become blurred as women's and men's activities become less dissimilar. This suggests that social context and living arrangements may affect sex roles, which in turn may affect sex patterns of language variation: outside old-age communities, sex-based linguistic differences increase while inside such communities, they decrease.

Unless variationist attention shifts markedly to explore a wide range of factors potentially affecting old-age language variation and change, important outstanding questions regarding the pace and nature of individual and community language change will remain unresolved. Only then can we truly contribute to the enterprise of answering theoretical questions about the nature of sociolinguistic lability, and the degree to which it affects our modelling of community-level language change over time.

4. Old challenges and new opportunities: approaches to studying old-age language variation and change

Above, we presented the case for making older adults a focal demographic in variationist research. Below, we offer practical suggestions for approaching the empirical study of old-age language use, and for overcoming some of the unique challenges variationists may face when planning and conducting old-age language projects. To promote the variationist study of age more generally, we flag suggestions that may apply more widely.

We established in Sections 2 and 3 the importance for variationist sociolinguistics of recognizing and exploring the great intra-group heterogeneity of the old-age population. Rose's (2006) rare variationist old-age study represents a move in this direction. She combined measures of chronological and social age to stratify her speaker sample into

‘younger old’ and ‘oldest old’: the former reported stable social networks and no disruption to their physical or social activities; the latter had limited their activities or were aged >90 years. This approach overcomes the limitations of using chronological age alone for categorizing older adults into sub-groups (e.g. the young old aged <75 years vs. the old old aged >75 years; Neugarten et al. 1965) or life-stages (e.g. the Third Age of self-fulfilment vs. the Fourth Age of dependence and decrepitude; Laslett 1987). While acknowledging that the old-age population potentially includes two generations with very different life experiences and histories, these latter approaches assume within-sub-group homogeneity. Rose’s approach, by contrast, acknowledges that those aged <90 years at least are heterogeneous on measures affecting their social participation and, by implication, their exposure to linguistic diversity: social networks and activity levels. As such it constitutes an important improvement on previous variationist studies that have not sub-divided older adults by any measure other than, occasionally, chronological age (see Section 2). With any kind of grouping, it is, of course, necessary that scholars follow variationist best practice and check that these do not mask inter-individual variations (Tagliamonte 2006:168). Yet in order for this practice to be revealing, scholars need at the outset – and resources permitting – record metadata of the kind outlined in Section 2 that may differentiate older adults and affect their language use.

Criteria for stratifying older – but also middle-aged – adults into socially meaningful and linguistically relevant sub-groups can be derived from ethnographic observations, as was the case in Rose (2006) and is widespread in variationist studies of adolescents (e.g. Eckert 2008; Wagner 2014), or from work in sociology and social gerontology. Gerontologists have identified a wide range of factors that diversify older adults in ways that may affect their contact with younger individuals and, by extension, their participation in ongoing language change (see Section 3.2): personality traits such as extraversion and openness (McCrae and John 1992; Smith and Baltes 1999); social isolation and emotional loneliness (De Jong Gierveld 1998; Thomopoulou et al. 2010); or social networks and social participation (Charles and Carstensen 2009; Litwin 2009). Crucially, gerontologists have developed quantifiable questionnaires for measuring these factors that can be adopted (and adapted) for variationist use. For example, the Lubben Social Network Scale is a self-reported scale used to assess the size, closeness and frequency of contacts of elderly respondents’ social networks (Lubben and Girona 2004). The De Jong Gierveld Loneliness Scale includes questions about the number and intimacy of older adults’ friendships and relationships in order to assess emotional and social loneliness (De Jong Gierveld and Kamphuis 1985). These questionnaires were designed specifically for use with older adults but similar ones for research with younger adults exist (e.g. the Social Convoy Questionnaire (Kahn & Antonucci 1980), or versions of the Victoria Longitudinal Study activity questionnaire (Jopp & Hertzog 2010)).

To explore any sociolinguistic effects of less obvious factors diversifying older adults – or individuals at other life-stages –, variationists could adopt a biographical approach to data collection that goes purposefully beyond the usual elicitation of residential, educational and occupational information integral to the sociolinguistic interview. Prominent in life-course perspectives on ageing (see footnote 1), the biographical approach assumes that individuals follow choice (rather than standard) biographies: they make personal decisions about their

life and lifestyle, leading to diverse life experiences and histories (see further De Jong Gierveld 2004; Hunt 2005). Variationists should therefore obtain detailed information about individuals' life-course such as their social class origin and any subsequent class mobility, educational, occupational and health histories, income and retirement funds etc. Such information may elucidate the heterogeneity of old-age (and other) speaker samples and uncover new sociolinguistically meaningful differentiators. (See also Bowie (2014:521) for a similar point about understanding individuals' subjective age.) Alternatively, as we noted in Section 3.1, variationists could undertake more ethnographic studies of older (and younger) adults, using participant-observation as a means to identify relevant social determinants of their linguistic variation and participation in language change.

In Section 3.2, we set out the value of exploring sociolinguistic differences between 'healthy' older individuals (i.e., those with preserved cognitive, physical and social functioning) and 'non-healthy' older individuals (i.e., those suffering physical or cognitive pathologies). Alas, self-reports (e.g. of sensory acuity or cognitive functioning) tend to be inaccurate and unreliable (Burke and Shafto 2008; Kiyak et al. 1994), and variationists are not generally qualified to diagnose or monitor participants' health status. The relevant qualifications are held by geriatricians, who specialize in the diagnosis and treatment of health conditions affecting older people. Through cross-disciplinary collaboration, geriatricians' expertise can be accessed to stratify speaker samples according to health status, monitor the onset and progression of health issues in longitudinal studies as well as isolate and explain potential effects of e.g. sensory and cognitive decline on observed patterns of language variation.

A related practical issue is the requirement for obtaining consent to study participation. Consent is only valid if it is informed, voluntary and competent. Most older adults live independently and experience good health. However, some live in nursing homes or experience pathological cognitive decline, which may – but does not have to! – affect their capacity to give voluntary and informed consent (see, *inter alia*, Gilhooly 2002; High and Doole 1995; Kayser-Jones and Koenig 1994; McMurdo et al. 2011; Ratzan 1980; Warner et al. 2008 for detailed discussions of these issues). Assessing decisional capacity is a complex task (see e.g. the UK Mental Capacity Act 2005) in which variationists are not generally trained or experienced. Again, it is through collaboration with healthcare professionals who have the requisite skills to assess capacity that we can overcome this obstacle, and indeed in some jurisdictions (such as Michigan, USA) their involvement may be legally required (MSU HRPP Manual, Section 6-8-D).

We argued earlier in favour of longitudinal studies of old-age language use (see Section 3.2). A challenge intrinsic to any longitudinal study is the attrition of study participants over time (Tillery and Bailey 2003:362-363). This problem is exacerbated in longitudinal studies of the later life-course due to older adults' increased risk of mortality and institutionalization, as well as the strong likelihood of selective attrition (McMurdo et al. 2011). For example, mortality-induced attrition is higher among older participants who experience cognitive impairment or social isolation (Bayles and Kaszniak 1987:Ch. 9; Bowling and Grundy 1998). Because cognitive impairment and social isolation are more prevalent among older adults than other age groups (see Sections 2 and 3), these speaker characteristics must be part of the sample design calculus. Unfortunately, interviewing large numbers of older adults at baseline

to facilitate sufficient sample size and representative sample constitution at follow-up is time- and cost-intensive, and conflicts with the pressure to conduct low-cost studies and produce quick results (see also Gerstenberg and Voeste 2015:4). Variationists might adopt gerontologists' and geriatricians' established techniques for mitigating attrition on follow-up, such as interviewing participants in mobility-friendly environments, allowing time prior to interview to establish rapport, or sending out birthday cards and annual newsletters (von Strauss et al. 1998; Wadsworth et al. 2003).

Variationist studies of old-age language use will also benefit from insights produced by colleagues in other fields of language sciences. For example, Fox et al. (1992) report that older adults with no hearing loss performed significantly worse than young adults in a vowel identification task. They speculate that age-related decline in memory or in sensory-processing skills may contribute to this disparity. Regardless of the cause, their finding that older adults have poorer signal processing ability points to a potential hypothesis for longitudinal sociolinguistic research: all other things being equal, older individuals with better signal processing ability will be more likely to attend to ongoing sound change in the community and perhaps participate in it, while those with poorer ability will be less likely to do so. To add another example, Burke and Shafto (2004) found that older adults' discourse contains higher rates of filled pauses such as 'um' and 'er' than younger adults'. They link this finding to older individuals' decline in working memory capacity, which constrains the amount of information they are able to hold for integrative processing. Insights such as this warn against the uncritical interpretation of cross-age differences in the use of discourse-pragmatic variables such as 'like' or 'I dunno', which – like 'um' and 'er' – sometimes function to buy processing time (Andersen 2001; Pichler 2013). They urge us to at least consider the possibility that cross-age differences in the frequency or functionality of such variables may be due to cognitive changes affecting older adults rather than ongoing developments in the variables' popularity or functionality.

We have emphasized throughout the importance of learning from and working with gerontologists, geriatricians and language scientists specialized in old-age language and communication. Successful studies of old-age language use (especially but not exclusively those involving individuals with neurodegenerative or other health conditions) will also benefit from collaboration with: neurologists; old-age psychiatrists; general practitioners; community or residential health- and social care professionals; family carers; support networks and community-based centres for older people. These individuals and organizations are uniquely positioned to advise on appropriate study design, and assess how older adults can benefit from variation research. The CLARe network, which we mentioned in Section 1, was established to advance language and ageing research through inter-disciplinary exploration of spoken and written language corpora. Given the practical hurdles associated with collecting old-age language data discussed above, the sharing and re-use of corpora through the network will be extremely valuable. Also, these corpora can afford multi-disciplinary insights into old-age language use without the need for intensive collaboration: the same dataset can be employed (asynchronously) by different researchers to answer

mutually relevant research questions.¹⁰ When close collaborations are desired or required, however, there are multiple ways for initiating them. Cross-disciplinary conferences such as those organized by the European Association for Communication in Healthcare (<https://www.each.eu/>) promote dialogue and partnership between linguists and healthcare professionals. Many institutions have research centres focused on ageing. For example, the Institute for Ageing at Newcastle University, UK (<http://www.ncl.ac.uk/ageing/>) brings together researchers working on all aspects of ageing in order “to create a society where all Live Better For Longer.” Through its ‘Voice Global’ initiative (www.voice-global.org), it capitalizes on the experience of older adults to develop research that will improve their lives. However achieved, cross-disciplinary collaborations as well as involvement of community members and organizations will promote an enhanced understanding of old-age language variation and change.

To end this section, we would like to highlight that working with older adults also offers great opportunities for variationists. Abrams and Farrell (2011) review studies showing that older adults’ storytelling and narrative skills are highly rated by listeners of all ages. They report that this has been attributed to older adults’ enhanced sensitivity to interpersonal dynamics, use of more complex narrative structures, exciting climatic build-up and resolution, reduced speech tempo, appealing prosody, and ability to focus stories at the relevant audience. For variationists, personal narratives are usually the locus of an informant’s most unmonitored speech, and thus a precious resource for determining that individual’s vernacular linguistic patterns (Labov 2009). They also often serve as a particularly clear window into individuals’ ideologies, stances and sense of identity, all of which are resources for analyzing the social meaning of linguistic variation.¹¹ For sociolinguists generally, for folklorists and for other scholars, narratives are an object of analysis in their own right (e.g. Clandinin and Connelly 2004), and the oral histories in which they are embedded can be of scholarly (and wider public) value to an even broader audience. We would do well, therefore, to capitalize on the story-telling enthusiasm and competence of older adults by recording them more often.

5. Older adults: their importance for variationist sociolinguistics

It may at first seem daunting to meaningfully and sensitively include older adults in sociolinguistic studies of variation and change, but it is not impossible. In renewing the calls to action made by Coupland et al. (1991) and others over recent decades, we hope to have provided enough new suggestions to inspire yet more ideas and actions from colleagues

¹⁰ As an example we refer to a dataset not currently part of CLARe: an archive of sermons produced by church officials at semi-annual conferences of the Mormon Church in Salt Lake City, Utah. Variationist sociolinguist Bowie (2011, 2015) has used these data to examine the degree to which older individuals change their use of dialect features over time. Hunter, a speech and hearing researcher who specializes in the biomechanics of the ageing voice, has used the same data to investigate listeners’ estimations of talker age (Hunter and Ferguson 2017; Hunter et al. 2012).

¹¹ An anonymous reviewer raises an important caveat: because older adults may have re-told their narratives many times, specific forms may have become routinized. We agree that this needs to be considered when exploring the social meaning of language variation in older adults’ narratives, and call for longitudinal studies of older and younger individuals’ narratives to explore the nature and extent of such routinization effects in this genre.

within and beyond variationist sociolinguistics. Above all, we have promoted the view that older adults are not merely chronologically advanced versions of middle adults to be included without reflection in large-scale community studies, nor are they too problematic – for biological, psychological or social reasons – to be included in community samples at all. So long as we contextualize older adults appropriately within their life-stage, their variationist study will help us to better understand pathways of sociolinguistic development in later life.

Given the biological, psychological and social heterogeneity of the old-age population, we must not assume a single pathway. We need to routinely and knowingly sample from a heterogeneous range of older speakers – the young old and the old old, the ‘healthy’ and ‘non-healthy’, the socially well-connected and isolated, the non-institutionalized and institutionalized, etc. – in order to identify the factors that diversify older adults sociolinguistically, and determine their pathways of sociolinguistic development. Cross-disciplinary collaborations and involvement of community members or organizations will aid us. We must also record and observe older adults across different contexts – domestic, social, clinical, institutional, cultural etc. – in order to explore their style repertoires. Sociolinguistic ethnography à la Rose (2006) will help us more accurately interpret old-age language use, and encourage us to think more carefully about how we conceptualize age and its attendant circumstances. Moreover, quality ethnography – coupled with academic collaborations and citizen involvement – can inform future fieldwork practices, from recruitment and retention of older adults, to briefing and debriefing, interview methods and ethical standards.¹²

Finally, let us not forget to confront our own personal, perhaps highly subtle and unconscious, ageism. We must ask ourselves whether our work sufficiently centres older adults, whether we view them – however unintentionally – as deficient, rather than proficient, language users. As Bowie (2010:65) has pointed out, “increasing age may give individuals more opportunities to use and to add to their linguistic repertoires, thereby increasing their linguistic ranges.” If we fully capture those repertoires and ranges, we will be promoting a positive image of older adults as creative language users as well as engaged and engaging social actors.

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¹² For example, Rose (2006:55) gradually refined how she formulated her interview questions. She learned that questions such as ‘What games did you play as a child?’, which has been commonly employed in sociolinguistic interviews for decades, can cause embarrassment for older adults with memory issues.

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