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TECHNOLOGY AND THE MARGINALIZATION OF OLDER ADULTS:
HOW POLITENESS THEORY AND STEREOTYPE EMBODIMENT INTERACT IN OLDER
ADULTS' TECHNOLOGY USE

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HONORS PROJECT

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Technology and the Marginalization of Older Adults:
How politeness theory and stereotype embodiment interact in older adults' technology use

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Abstract

Marginalization of older adults is a long-time and pervasive fact of society. Technology use can make older adults feel less marginalized by connecting them socially, such as with communication technologies. However, older adults on average are less technology literate than younger adults; this can add to feelings of marginalization. In this study, I analyzed structured open-ended interviews and found unexpected instances of marginalization towards older adults related to technology; for example, older adults are most likely to withstand marginalized comments from their own adult children and family members. I applied politeness theory and the stereotype embodiment model to the coded interviews and found close relationships, such as with family and friends, are responsible for a clear majority of negative talk towards older adults about technology. The stereotype embodiment model explains why older adults tolerate this negative and marginalizing talk from their friends and family.

Introduction

Older adults face significant marginalization in their everyday lives and from societal expectations and assumptions (Carmen, 2012). Common assumptions towards older adults include, among other things, a lack of ability to learn new things and a lack of physical ability (Resnick, 2012). Technology is increasingly seen as a possible solution for older adults to feel more included and connected; however, society and the media increasingly see older adults as unable to adapt and learn the new technologies which dwell in everyday tasks; such as phones, banking, driving, and shopping.

The field has much research on the topic of how technology can make older adults feel more included once adopted, but lacks research on the topic of how the growing prevalence of technology contributes to this marginalization in the first place. As technology's role in daily life grows, individuals – often older adults – with less technology literacy face marginalization.

In order to explore these issues, I conducted interviews with people across the lifespan, asking questions about experiences with technology, ageism, and the inclusion of older adults in mainstream society. In this research, I used qualitative findings within structured open-ended interviews with adults of all ages and a special focus on older adults of 46-75 years old. Within the protocol, the interviewees were asked about marginalization of older adults, including how technology relates to marginalization, if the interviewees had experienced ageism, and how the marginalization of older adults can be best addressed so older adults are more included in mainstream society.

The findings of the research are placed within the larger field of knowledge of technology, older adults, and marginalization. Since the marginalization of older adults is a pervasive reality (Carmen, 2012), and technology is found to contribute to these feelings, the findings of this research add significant knowledge to the field.

Literature Review

The term "ageism" was coined in 1969 by Robert N. Butler and likened to racism and sexism (Achenbaum, 2015). Achenbaum, in his "A History Of Ageism Since 1969," tracks acts of ageism back centuries to common acts of casting aside older adults as they became lesser contributors to society in terms of physical ability to contribute through physical labor.

Throughout history, societies have run the gamete of providing for and cherishing older members to having them wander off to die. Modern laws, such as anti-retirement requirement laws and

similar protections for older adults show an appreciation for them; however, these laws are not able to combat deep-rooted societal ageism. Minority individuals who age to become older adults in turn must handle the reality of intersecting minority identities. In some cases, older adults lose some physical ability which contributes further to ageism in older age (Achenbaum, 2015).

Age discrimination in the United States fell well onto the political stage in the 1960s with The Age Discrimination and Employment Act of 1967, which prohibited and prohibits employer age discrimination for individuals over the age of 40 (Irving, 2015). According to Irving, two thirds of baby boomers intend to work past the traditional retirement age of 65; however, two thirds of adults over the age of 45 experience ageism in the workforce. This legal protection of older adults combats marginalization indirectly since older adults who are not employed are more likely to feel marginalized or lonesome (Irving, 2015).

At its core, ageism is relevant to all since everyone will, likely, be an older adult at some point (Palmore, 2001). Before and as one ages, micro-aggressions are an important point of awareness – they include assumptions of lesser abilities such as hearing or learning and being talked down to or talked at slowly (Palmore, 2001; Snaedel, 2016). These micro-aggressions are present in language, too. Terms such as senile, demented and aged have for the most part been placed on the back burner and are known to carry negative connotations (Resnick, 2012). The term "elderly" falls into this category, and carries ageist connotations as it implies lesser ability; in 1995 the United Nations did away with the term in policy making, replacing with “older persons” (Resnick, 2012).

The population of older adults is growing, and their marginalization is very real. However, steps can be taken – both by older adults and society at large – to minimize ageism's effects. Older adults who socialize, especially through day centers, tend to feel less marginalized

than older adults who do not interact with a local day center (Carmen, 2012). This idea contributes to the discussion of where the responsibility of inclusion falls, and how ageism can be combatted. Older adults who seek to be involved can successfully combat marginalization. Individuals not using technology and digital products are becoming excluded. Older adults' lower usage of technology sometimes stems from a lack of interest; however, it is too a lack of purposeful inclusion by the makers of technology who do not consider the general strengths and weaknesses of older adults (Hanson, 2010). Designing more technologies targeted for older adults would help combat marginalization which is occurring by cause of technology. Hanson's research aligns with its counterparts' that older adults, unlike what is often assumed, do not lack the interest or ability to use new technologies; rather, new technologies are sometimes not compatible with how they would like to use them.

One reason for a lack of technology use, and specifically social networking technologies, is older adults' concern for information privacy (Jung, 2017). Jung's qualitative research utilized 46 responses from older adults whose ages averaged over 80 years. In similar fashion to other studies (Mitzner, 2010), privacy emerged as a concern for many older adults in relation to their use of technology. In relation to privacy, social networking sites do not appeal to older adults' wants because their default settings are often more public than private in terms of information viewing, etc. Jung's work highlights that older adults who do not use technology do so not out of a lack of ability, but from a lack of interest.

Security and privacy was also found to be a concern in Mitzner's (2010) research. Older adults in this study notably weighed the pros and cons of technology, which were convenience (pro) and security and reliability (con). Mitzner's research found a need for training programs and the potential for technology to improve and monitor health as older adults age.

Hill's (2015) research of older adults' experiences and perceptions of technology aligns with Gish's; technology is encountered more and more in everyday living. Specifically, more and more everyday activities are done online (Hill, 2015). As this occurs, older adults are left out due to a lack of technology and internet skills. This is on top of a decreasing social network as a common side effect of aging – a similar observation to Carmen's assessment of socialization through day centers. These things together add to marginalization among older adults. However, just as technology can be a culprit of isolation, it can also serve as a solution. Hill uses a small-scale and therefore more in-depth approach of focus groups finding two themes: "disempowerment" and "empowerment" (Hill, 2015). Social inclusion among older adults is recognized as very important for keeping older adults included in mainstream society; however, fast-changing technology can serve to impair this. Hill used the disempowerment theme for when technology impairs inclusion of older adults. According to Hill's themes, Gish's study of car technology would be a finding of new technology empowerment since it aids older adults to age and maintain independence and confidence, which in turn makes inclusion easier.

The literature on the topic of older adults is at a consensus: technology can help reduce feelings of social isolation among older adults (Khosravi, 2016). Khosravi looks at various technologies and their usages for reducing social isolation feelings. The research recognizes marginalization among older adults as real and caused by factors including technology. In agreement with other sources and the findings of this research, Khosravi recognizes the need for more technologies to target older adults and for training to be available for older adults to learn new and existing technologies (Khosravi, 2016).

Older adults are less technology literate than the rest of the population (Tsai, 2015). As technology advances and becomes more commonplace, older adults can find themselves less

knowledgeable and therefore less able to use and embrace new and advancing technologies. Specifically, older adults can face challenges when required to utilize new technologies in everyday activities such as driving (Gish, 2017). Driving technologies include features such as back-up cameras and lane departure warning systems. Gish's qualitative study finds that older adults do not tend to seek these new car technologies can have difficulty first adopting them; however, most older adults learn and find the new technologies helpful. Use of these technologies were reported to complement aging and driving. An increase feeling of safety tended to correlate to comfort with the new technology. This technology combats marginalization of older adults as it allows for some older adults to safely drive who may not be or feel safe doing so without the new technologies (i.e. difficulty turning around and therefore using a backup camera). Gish's qualitative study is an example of how technology, even though not sought, can help combat older adult marginalization (Gish, 2017). However, not all new technologies are so easily adapted by new users. A study by Stinchcombe et. al compared younger adults' and older adults' use of a manufacturer GPS in new car the participants had never driven (Stinchcombe, 2017). The older and younger adults alike had difficulty and faced frustration when first using the GPS, though younger adults tended to adapt more quickly and follow the GPS more accurately than the older adults, who were more likely to face prolonged frustration and confusion while following and using the GPS. This study is important in that it shows not all new technologies are easily used and adopted by everyone, and older adults face more difficulties in adapting to new technologies (Stinchcombe, 2017). Stinchcombe's study supports the claim that older adults are less technology literate than younger adults (Tsai, 2015).

Technology is not an inherent burden or cause of feelings of marginalization for technology (il)literate older adults. Gish's (2017) study shows instances where technology can be

easily adopted by and is helpful for older adults. Meanwhile, Stinchombe's (2017) shows how new technologies can be frustrating and difficult to use. With the helpful potential of technology in mind, the next logical step is how to make older adults more prone to easier utility of technologies such as built-in GPS. Training programs targeted towards older adults to use new technologies can help bridge the gap.

Training programs to address the complexities of technology usage by older adults is recommended in research involving tablet adoption practices (Magsamen-Conrad, 2015). Age is not the main cause of whether tablet usage is adopted; user groups of communication technologies are not limited to age, though attitudes and comfort levels with technology often influence its usage likelihood among individuals. Therefore, older adults who are or become comfortable with technology can be just as likely to adopt its usage as other adults.

Communication technologies, among other technologies, can improve life for older adults. Marginalization, or at the least the feelings attributed, is less likely to occur when older adults use communication technologies (Tsai, 2015). Low self-efficacy among older adults is pinpointed as a cause of low technology usage among older adults. Older adults who use tablets often do so because someone in their life wants them to use them. In turn, the successful use of tablets combated feelings of marginalization by increasing feelings of connectedness and “digital inclusion” (Tsai, 2015). Formal education, such as enrollment in technology use classes, can help build skills which will in turn combat feelings of marginalization when older adults use and talk about technology.

The literature to this point establishes well the existence of marginalization of older adults and its scope within modern technology. Most of the literature is focused on how and why older adults use technology, and how technology can help in the age-old problem of older adult

marginalization. However, there is a significant lack of research in how technology contributes to this marginalization and the addressing of this cause to create a better solution to minimize older adults' marginalization. Specifically, this paper seeks to connect technology marginalization with practical theory to better describe how older adults are affected by stereotypes surrounding older adults and technology. Therefore, I propose the following research questions:

RQ1: How does marginalization of older adults present itself when using technology?

RQ2: How do older adults react to acts of marginalization against themselves?

RQ3: How do younger adults and older adults view the degree to which older adults are included in mainstream society?

Method

Participants.

Participants (table 1) were 37 people across the lifespan with a range of 20 to 73 and an average age of 41.57 years old. 24 participants self-identified as female and 13 participants self-identified as male. 31 of the 37 participants reported completing at least "some college" or were currently in college. A few participants had advanced degrees. Most participants were white; 3 identified as black or African American and 1 identified as Hispanic. Participants were of convenience sampling in the American Midwest. Most participants were reached through social relation of the research group members. Since participants were largely friends and families of the researchers, they are people who would otherwise be unlikely to participate in this research.

Procedure. Research was conducted with structured open-ended interview protocols administered with convenience sampling of individuals of all ages. Though the protocol focused primarily on questions regarding health communication technologies, a few specific questions

focused on technology usage and older adults. Interviewees participated voluntarily and without compensation. Research was performed by trained research methods students who were familiar and practiced with the protocol before conducting any of the interviews. Each student, including myself, interviewed at least one adult under 40 years old and one adult 40 years old or older. The nature of this research meant participants were from social networks of the researcher; therefore, participants would likely have not volunteered to have been part of the research if not approached by their friend or family member. This is advantageous, as most research can only reach individuals who volunteer up front to partake; participants of this research had no special interest in the topic.

In addition to being trained in research technique and the used protocol, I have more experience and knowledge on the topic of technology and older adults from participation in a 16-week course involving teaching technology skills to older adults and creating the accompanying curriculum. The curriculum was for tablet and smartphone use, and taught skills in real time to older adults enrolled in the weekly class. Experiences from teaching this class are pulled in the creation of tables 2 and 3, which are referenced later.

Analysis. Digitally created transcripts were read line-by-line. The responses were organized and then analyzed for common themes. Themes found in the analysis included how family members speak to their older adult relatives about technology, similarities in older adults' reactions to marginalization acts, and the difference between how younger and older adults view older adult marginalization.

Once interview responses were gathered, responses ranged from individuals aged 20 to 73 years. Age brackets were of 4 ranges, based upon those established in life course research conducted by David-Barrett et. Al. (2016). Young adulthood (18-28) and middle adulthood (29-

45) were grouped into one for our purposes, and examined to a lesser degree. In total, there were 18 responses coded of participants falling into the ranges of young and middle adulthood. Late adulthood is comprised of 46 to 75 years old; 19 responses were coded of participants falling into this age range of late adulthood. The old age range is 76 and up; no responses were coded from participants falling into this age range.

The questions coded for young and middle adulthood participants were: (I) "Is it your perception that older adults are included and sufficiently represented in mainstream society?" And (II) "How could older adults be included and represented in mainstream society?" Participants were asked to explain why, offering more than yes/no answers if possible. In addition to the above questions, questions coded for individuals of late adulthood included (I) "Talk about a time when you felt that someone treated you differently (positive or negative) because you did not know how to use a specific type of technology;" (II) "Would you tell me about a time when you felt that someone treated you differently (positive or negative) because of your age?" (III) "Before I asked if you have felt stigmatized due to your age. Instead of, or in addition to, feeling stigmatized, do you feel or have you ever felt excluded or isolated by cause of your age? Please explain;" (IV) "Does technology ever contribute to any of the above feelings?/Have you ever felt excluded or isolated in society by cause of technology?" (V) "In general, how stigmatized does using (or not using) technology make you feel with 0 being not at all stigmatized and 10 being very stigmatized?" and (VI) "In general, how stigmatized do you feel because of age with 0 being not at all stigmatized and 10 being very stigmatized?" Interviews were coded until saturation of responses was reached.

As noted, themes were noticed of marginalization patterns and perception of marginalization. The most pervasive theme was how family members spoke to older adult family

members (as reported by the older adults) and how the older adults reacted to marginalization. Family members seemed to put politeness aside when talking about technology, and the older adults accepted this behavior and other acts of marginalization. I consulted experts in the fields of gerontology and identity and found answers within politeness theory (Brown & Levinson, 1987) and the stereotype embodiment model (Levy, 2009).

Findings

Older adults are less included in mainstream society than younger adults; this lack of inclusion leads to marginalization of older adults and presents itself most often with younger adults' assumptions of a lack of ability, an unwillingness to learn new things, and certain aging deficits such as hearing loss (Palmore, 2001; Snaedel, 2016). Better inclusion of older adults into society can be beneficial in lowering feelings of loneliness, which can be common as older adults age (Irving, 2015). Inclusion opportunities can include classes aimed at older adults, marketing including older adults, and technology made with older adults in mind. These opportunities must be offered by the majority to include the minority – as in, younger adults (the ingroup) have the ability to include older adults (the outgroup). Technology can be a tool to combat the marginalization of older adults, such as instances when older adults use communication technologies to keep in touch with friends and relatives (Tsai, 2015). Technology can, however, have negative impacts on the inclusion of older adults, such as when older adults are technology (il)literate. Older adults face instances of marginalization acts when using technology. This research was aimed at understanding how marginalization of older adults present itself when using technology, older adults' reaction to marginalization, and how adults of all ages view marginalization of older adults.

From the responses of the 19 participants in late adulthood, 89% identified a time when they were marginalized by someone when using technology. Of the disclosed instances, all were committed by someone the older adult knew, and most were committed by family members (73%). This theme is explained with politeness theory and the stereotype embodiment model. Other instances often occurred in the workplace.

Though not explicitly feeling marginalized, older adults are able to recall instances of marginalization. In general, older adults (those in late adulthood) did not respond as feeling stigmatized by cause of their age alone. Of the total 15 responses to this question, 7 did not feel stigmatized at all, and 2 felt stigmatized only 1-3 on a 10-point scale. In a similar fashion, older adults responded as not feeling very stigmatized by technology, with 6 responded not stigmatized at all and 5 in the 1-3 range. However, despite not feeling stigmatized in a general sense of the word, most older adults were able to recall a time when someone treated them differently because they were unable to use a piece of technology.

Family members. Family members were often the examples disclosed by participants. Of the 19 responses from older adults about a time when they were treated differently because they were unable to use a piece of technology, only 11% could not recall a time. Of the 89% who could recall a time, 53% recalled such occurrences of their adult children treating them negatively. The usual response included a defense of their children, saying their children were simply "teasing" or "poking fun" of their technology usage, for example, "My kids make fun of me. High school students make fun of me, they grew up with technology" (participant 7, age 56, female). 11% of the responses recalled a spouse or relative (other than a child) treating them negatively because of technology usage. 16% of responders cited co-workers treating them

negatively, 11% responded with instances of friends doing so, and, as noted, 11% of the older adults could not recall a time when they were treated differently.

Of the content coded and examined, the occurrences and circumstances of acts of marginalization are of most interest. As noted, older adults do not feel particularly stigmatized by cause of technology, and they generally feel included in mainstream society; however, they overwhelmingly identify circumstances, often of a repetitious nature, when they are treated differently because they do not use technology or understand the use of technology to the same degree as younger people.

What's more of interest are the circumstances behind these experiences; all 17 of the experiences reported by older adults of being treated differently because they "did not know how to use a specific type of technology" were instances of people they knew; there were no examples of strangers. 59% of the instances were older adults being treated differently by their own children and 12% were instances involving a spouse or other relative. So, 71% of the instances of an act of marginalization because of technology involved family members. Responses from older adults included: "And my kids acted like I was stupid because I couldn't figure out how to do a lot of things. But I think that's probably fairly typical. Those people at Verizon, they're my best friends," (participant 3, age 55, female) and "Just with my children when they roll their eyes at me and they laugh at me because I don't know how to do some things, but it's okay. They think it's funny when I don't know how to do things." (participant 12, age 60, female). Both of these responses, though only two of many, describe actions of the older adults' own children marginalizing them, and the older adults stating that this kind of behavior is acceptable and normal.

Perceptions of marginalization. 7 older adults felt they had been excluded or isolated because of their age, while 12 did not. 8 felt technology was a cause of exclusion and isolation, while 11 did not cite technology as a cause of isolation or exclusion. Older adults, on average, reported having experienced ageism, or being treated differently because of their age; 12 older adults could describe a time when this occurred; 6 of the 12 occurred at or where workplace related.

The responses to the questions about older adults being included in mainstream society were coded for young, middle, and late adulthood responses. As such, the differences and similarities in responses can be compared and contrasted among the 18-45 year old and the 46-75 year old groups. Of the older adults, 16 versus 3 felt older adults were included in mainstream society; this was a distinct discrepancy to the 7 versus 9 young and middle adulthood respondents who felt older adults were included in mainstream society; older adults think older adults are included more than younger adults think older adults are included. Despite this difference in responses, the younger group of respondents and the older adult respondents responded similarly to the question "Can you think of any ways older adults could be even more included in mainstream society?" Older adults and younger adults both think the majority (younger people) are more responsible than older adults for the inclusion of older adults, equally citing suggestions of more offerings, such as technology classes, for older adults.

Discussion

Older adults interviewed consistently disclosed instances of a family member marginalizing them when using technology. An attempt to explain this type of behavior – children and other relatives talking down to their older adult parents and relatives – can be found in the framework of politeness theory (Brown & Levinson, 1987).

Politeness theory. Politeness theory (Brown & Levinson, 1987) prescribes that advice inherently threatens one's face as it suggests the recipient is unable to select the correct course of action without intervention. As such, advice that patronizes is sure to threaten face even more (Ryan, Giles, Bartolucci, & Henwood, 1986). So, in the case of older adults seeking help with technology, patronizing advice that includes laughing, making fun, or similar behaviors are more prone to threaten face of older adults – even if the patronizing advice is from a loved one. Furthermore, "patronizing talk may have negative consequences for older adults, reinforcing negative age stereotypes, causing them to question their own competence, and contributing to age-related declines" (Hummert & Mazloff, 2001). This impact on older adults is crucial when considering their marginalization, and its application to technology is increasingly relevant as older adults become more and more required to use technology, in turn seeking technology advice at higher rates. Examples of advice more and less likely to threaten face of older adults in the context of learning new technology skills is found in tables 2 and 3. This advice has been devised from the information contained in the interviews with older adults, from my 16-week long experience teaching older adults tablet and smartphone classes, and from the general research available on technology and older adults.

Workplace. The next most noted instances of marginalization as it pertains to technology involved the workplace. 32% of the older adults reported instances when technology made them feel marginalized at work when co-workers treated them differently or when necessary technology was difficult to use. Unlike the instances of close family and friends, co-workers were less likely to make fun or joke about the older adults' technology literacy. This, too, is explained within the framework of politeness theory. Co-workers, who most often do not have close relationships like family members do, are bound by social norms to handle older

employees' questions about technology with more grace. However, this is isolated to instances such as when an IT department helps an employee with technology. Therefore, non-IT co-workers can be heavy offenders of engaging in technology stereotypes towards older adults that contribute to feelings of marginalization in the workplace (Irving, 2015).

Stereotype embodiment. Even though only 7 out of the 19 older adults answered "yes" to feeling excluded or marginalized by cause of their age, 8 of the same 19 answered "yes" to feeling excluded or marginalized by cause of technology. Though they be minority responses, it is still very notable that 42% of the older adults interviewed felt excluded because of technology.

The feelings of personal exclusion did not transfer to the responses from older adults about older adults being included. Though 42% of the older adults felt personally excluded because of technology, only 16% of the 19 felt like older adults in general were not well enough included and represented in mainstream society. This phenomenon can be viewed using the stereotype embodiment model (Levy, 2009). The stereotype embodiment model figures, in the case of older adults, stereotypes held about older adults are held for life; so, an older adult who held negative older adult stereotypes when he or she was young still holds those same stereotypes as an older adult (Fawsitt & Setti, 2017). The model also supplies our understanding that an older adult's self-perception of aging may be distinct and different from his or her perceptions of aging and older adults in general (Levy, 2008). As such, this discrepancy allows for explanation of the difference in our responses of older adults recalling feeling personally excluded, though not feeling older adults in general are excluded or marginalized. Older adults are quick to dismiss feelings of exclusion as normal because they fall in line with their own stereotypes of themselves and older adults in general. In this vein, for instances of

marginalization, exclusion, and stereotype holding, politeness theory and the stereotype embodiment model are intertwined.

Politeness theory and stereotype embodiment. The relationship between politeness theory and stereotype embodiment is apparent in the interview data, as older adults dismiss instances of marginalization for two reasons: a) their offender uses a close relationship to hide the reality of a marginalization instance, and b) the older adult accepts the marginalization as merited since the stereotypes in play are held by the ingroup member *and* the outgroup member. So, whenever considering how older adults interact with younger adults, and in particular with their adult children and family members, both politeness theory and the stereotype embodiment model are in play. This is especially true and relevant in the context of technology.

Limitations and Future studies

Research limitations of this study included a limited access to sample population and self-reporting from participants. Participants were primarily of convenience for a team of researchers. Participants included friends and family members of participants. Though this sampling method was limiting, it did provide a sample of participants who otherwise would likely have not participated. This means the research was more inclusive than other voluntary research. Because some participants were from a local senior center; these participants, as outlined in previous research, are less likely to feel marginalized from mainstream society. However, the participants who were family and friends also were more likely to be honest and open in their responses; an advantage compared to random sampling. Like any qualitative research, this protocol was open-ended and self-reported. So, there is no way for responses to be independently verified.

With a more complete understanding of how stereotypes influence older adults' experiences using and learning new technologies, future research on the topic should be targeted on those stereotypes. With an increased understanding of precise stereotypes held by both younger and older adults regarding technology use, solutions to combat marginalization in the sphere of technology use can be pursued. Directives aimed at younger and older adults alike can include the awareness of how marginalization and stereotypes manifest themselves, how exclusion and ageism can hide in the good intent of family and friends, and how older adults are contributing to their own marginalization by accepting ageist acts, especially those from family and friends, as normal and acceptable.

Conclusion

Technology is a significant contributor to feelings of marginalization among older adults. Specifically, these feelings come not directly from a lack of technology literacy, but from other adults who speak to assumed technology (il)literate older adults in a way that threatens face. These instances are most commonly committed by children and family members of older adults. Per the stereotype embodiment model, older adults internalize and subject themselves to age-negative stereotypes, further contributing to the marginalization overall.

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Table 1.

Participants

Age		
	Early Adulthood and Middle Adulthood (18-45)	18 (49%)
	Late Adulthood (46-75)	19 (51%)
Sex		
	Male	13 (35%)
	Female	24 (65%)
Level of Education		
	No college	3 (8%)
	Some college	16 (43%)
	4-year degree or higher	18 (49%)
Ethnicity		
	White	33 (89%)
	African American	3 (8%)
	Hispanic	1 (3%)

Table 2

Positive behaviors less likely to threaten face.

POSITIVE BEHAVIOR	EXAMPLE / STRATEGY
Ask questions about their knowledge.	<p>“Tell me about how you use email on your device.”</p> <p>“Do you ever listen to music on your device?”</p>
Break down tasks into steps.	<p>“To open your email we’ll have to go back to the home screen, then find the app you use for email. Then we’ll get to opening your mail.”</p>
Be patient and thorough.	<p>When teaching someone, they’ll notice sighing or other signs of impatience, like eye rolling. Don’t allow a shortage of time to impact teaching.</p>
Encourage them to try new tasks.	<p>“I can see why you don’t have interest in Facebook. I didn’t understand it at first either, but it’s really helped me to stay in touch with friends.”</p>
Understand aging limitations they may have.	<p>Devices have options for varies ability levels. Some older adults may have trouble pressing multiple buttons at a time, or may have trouble with dim screens. There are always work-arounds to things like this. Take the time to observe difficulties and offer these alternatives.</p>
Talk them down from discouraging thoughts.	<p>“No, you’re not stupid. I’m not sure why it’s set-up like this either, but I know you’ll get the hang of it with some practice.”</p>
Create a personal bond and ask questions to create a relationship.	<p>Older adults, and people in general, will react better if they feel there is a genuine relationship present. Tell them where you’re from, why you’re teaching them, etc. Ask general questions about them. They will be more likely to ask questions this way.</p>
Ask them if they fully understand.	<p>Don’t assume they got it the first time. You can ask them to show you how to do a task to be sure they understood your directions.</p>

Ask what concerns they may have about technology.	“Technology might be new to you. Are there concerns you’ve had that make you hesitant to use this technology?”
Relate technology skills to other skills they may have.	“The key board layout is no different than what you might have learned to type on in school.” OR “Just like on your phone, this tablet has volume buttons.”
Remember the first time you picked up a smartphone, computer, etc.	New technology is not inherently easy.

Table 3

Negative behaviors more likely to threaten face.

NEGATIVE BEHAVIOR	EXAMPLE / STRATEGY
Assume a lack of ability.	Every older adult ages differently. Never assume an older adult is hard of hearing, etc. Ask “do you have concerns about learning/using this technology?”
Do the tasks for them.	Older adults want to learn how to use new technology, not just watch others do it for them. If they ask you to do it, encourage them to try, or tell them to watch closely because the next time they’ll do it.
Raise your voice, get agitated, or rush.	Be patient – the best teachers are. Signs that you are agitated or in a rush will discourage older adults from asking questions and taking the time they need to truly learn the skills.
Act like they should already know how to do a task.	“Don’t you know how to control the volume?” “You don’t ever use the lock button? That’s crazy!”
Openly discussion any limitations unless they mention it.	“It looks like you can’t see the search bar, do you have vision problems?” INSTEAD ask if they are having any particular problems, and only offer solutions as they mention a problem.
Agree with any discouraging talk, such as “I’m no good at this.”	“Yeah, you’re right, this will take forever for you to learn.”
Begin a lesson without introducing yourself a bit.	“Alright, my name is John, let’s get started.” This type of introduction is too impersonal.
Assume silence is understanding.	Moving on because they don’t say anything – ask if they understand and have them repeat tasks to practice in front of you.