

5 The marketing of technology products for older people

Evidence of visual ageism

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Visual ageism

Media content becomes more and more visual with the advance of digital technology, and people are part of this content. It is important to question how older people in our digitising and aging society are visually represented and to which extent media convey forms of “visual ageism”, a phenomenon coined by Ivan and Loos (2018, p. 164) as “the social practice of visually underrepresenting older people or misrepresenting them in a prejudiced way”. In the case of stereotypical representations of old people in digital media content, cultural aspects shape the way they are portrayed. What it means to get old, including the positive and negative aspects of aging, could differ from one country to another (Cruikshank, 2013; Fry et al., 1997).

“Ageing well” and similar trends as “healthy aging” (<http://www.healthy-ageing.eu/>), “positive aging” (Featherstone & Hepworth, 1995), “active aging” (Riva et al., 2014; WHO, 2002) and “successful aging” (Andrews, 2009; Baltes & Baltes, 1993; Foster & Walker, 2014; Rowe & Kahn, 1997) focus on the quality of the aging experience (Orpin et al., 2013; WHO, 2014) and ultimately make people responsible for their health and wellbeing and discipline them into following ideals of perfect and ageless life (Holstein & Minkler, 2003; Katz & Marshall, 2003). Underlined by a neoliberal agenda, such discourses emphasise the individual responsible for the process of aging, which is regarded as a personal project worth pursuing to age successfully (Chapman, 2005; Loos, 2013; Orpin et al., 2013). We have previously criticised such a normative approach to aging in the visual representation of older adults (see Loos et al., 2017a).

Furthermore, visual ageism in (digital) media does include not only images that other age groups have about older people but also images older people have about themselves. There is a large body of research on internalised stereotypes (Ayalon & Tesch-Römer, 2017; Kornadt & Rothermund, 2012; Kornadt et al., 2017) and on how societal practices of representing old people are adopted by older people themselves – sometimes with negative effects on their performance in a different type of activities (i.e., visual accuracy; technology appropriation), on their health and wellbeing (see Levy et al., 2021).

We face a paradox in the way older people are visually represented in the media: On the one hand, the over-homogeneity of older people's visual portrayals derived from and reinforces our internalised stereotypes about old age (Lester & Ross 2003; Loos, 2013); and on the other hand, the empirical evidence showing the fact the older we grow, the more diverse we get as a group, a phenomenon called "aged heterogeneity" (see for example Stone et al., 2017). People could be rather unaware of the age heterogeneity phenomenon and caught in their prejudices about how older age might look like.

Equally important is to study visual ageism in cross-cultural contexts; approaching digital media content created and distributed for and with an older audience in mind. In previous studies, we explore visual portrayals of older adults in different countries, trying to reveal the role of cultural factors. In one study (Loos et al., 2017a), we investigated the way older people are visually represented on the websites of the organisations for older people in seven European countries (Finland, Italy, the Netherlands, Poland and Romania, Spain and the UK). We used an analytical approach based on visual content analysis inspired by the dimensional model of the national cultural differences proposed by Hofstede (1991; 2001; 2011). We investigated the role of two Hofstede cultural dimensions: Individualism/Collectivism (IDV) and Masculinity/Femininity (MAS) and described the characteristics of the "aging well" discourse in the visual representations of older people and how such discourse differed in the investigated countries.

Visual ageism: Previous work

The results demonstrated that in all seven countries, older people were mostly visually represented as healthy/active; while the cases in which the visual content represented older people as frail/passive were fewer, which is consonant with the "aging well" discourse and in line with the results of another explorative study previously conducted in the Netherlands by Loos (2013). As for the role of cultural context, there were differences between the analysed countries in the visual content, especially for the percentage of visual items describing frailty/passivity in later life. Such results confirm the general logic of online media to favour positive over negative content (see Klinger & Svensson, 2018). Particularly on the websites from the UK, Poland and Romania, we found more visual content (30%) accounting for frailty/passivity than on the website from Finland (4%), for example, consistent with the idea of cultural differences in the way older people are portrayed. Our data also showed that in most cases, older people tend to be represented together with others in the photographs on the websites of organisations for older people. A possible explanation could be that this visual representation is consistent with the mission of such organisations – to bring individuals together. Still, the percentage of visual content coded as "older people together with others" significantly varied from country to country.

In a more recent study (Loos et al., 2022), the authors revealed the visual ageism of public organisations' websites in Denmark, the Netherlands and the UK: the overuse of third-age (young older) connoting health and activity as opposed to physical incapacity and vulnerability. Such visual portrayals enhance the risk of misrepresentation and fail to represent age heterogeneity. That particular study draws attention to visual signs produced by public organisations and the way they are distributed and consumed by the heterogeneous target group of older people. After all, the analysis of "visual ageism" should also take into account the perspective of the consumers and the perspective of those involved in selecting and distributing certain visual items about and with older adults.

We previously investigated visual ageism in traditional media (Loos & Ivan, 2018). We reviewed empirical studies on print and television advertisements and television programs conducted since 1950 in Europe and North America and concluded that: "over time, media representations of older people have moved from visual under- and misrepresentation (negative images) to more positive depictions" (Loos & Ivan, 2018, p. 166). We found that print and television advertisements started the transition towards a more positive visual representation of older people during the last decade of the 20th century; followed by television programs some years later. Our study showed a continuous underrepresentation of the oldest-old in traditional media over time.

Similarly, Ylänné (2021) conducted a content analytic comparison between two corpora of adverts (221 ads from 1999 to 2004 and 313 ads from 2011 to 2016) showing the depiction of older adults in the advertisements from UK magazines. The study found a relative consistency in the product categories, linking older adults with the health domain and a decline in the humorous portrayals of older adults from 1999 to 2016. This particular study confirmed the fact that advertising and marketing strategies are in line with the aspirational third-age discourse and imagery, contributing to the marginalisation of the oldest adults and a normative portrayal of later life which Ylänné (2021, p. 1) described as "ageless".

Current study

Aim and research questions

The current study presents a systematic literature review of research studies conducted during the past ten years (2011–2021) to reveal the visual portrayals of older adults in advertising and marketing strategies for technological products. We proceeded to a systematic search of four scientific databases which are largely used nowadays by scholars from the social sciences: Web of Science, Scopus, ProQuest and Science Direct. While Web of Science aggregates articles, especially from top-ranked journals, ProQuest was selected by the fact that the content is easily accessible to the academic community and openly available online.

The systematic literature review aim was to find possible evidence of visual ageism in the studies having a focus on advertisement and technology. We particularly looked at research studies that included information about older adults (no specific age limit), regardless of whether such studies investigated stereotypes or just the presence and the characteristics of the older persons in the visual content (video or photo content) of different technological products. We treat “technology” as a broader term and include various references to technological products, from mechanical technologies (for example, automotive and watches) to Internet-based technologies (for example, tablets and assistive technologies). The goal was two answers two research questions:

RQ1. What are the visual portrayals of older adults in the advertising for different technology products, as resulting from studies conducted during the past ten years? We looked for indications of visual ageism – in a sense that older people were underrepresented, stereotypical represented or represented in peripheral roles.

RQ2. What are the visual portrayals of older adults in the marketing strategies for different technologies, as resulting from studies conducted during the past ten years? Here we want to explore the association between older adults and certain types of technologies

In addition to the two research questions described above, we explore potential contextual aspects in the way older adults are visually represented, and we search for socio-cultural differences, differences in methodologies, and also what age group is investigated in the studies showing evidence of older adults’ presence in technology products’ advertisements. In doing so, we shed light on the interest in the current literature on the topic of visual ageism and technology and indicate gaps in which we need further development.

Method

Searching procedure

The search for articles was limited to peer review articles written in English or have a title and an abstract in English during the time frame 1.01.2011–1.11.2021. In all four databases, Web of Science, Scopus, Science Direct and ProQuest, we used three sets of keywords: *advertisements and technology*; *older people and technology advertisements*, and *older people and stereotypes in advertising*. For the first set of keywords, “advertisements and technology”, we added a filter using *older people* and *marketing strategies* to narrow the search to those articles which were more pertinent for our review. However, this supplementary filter was not used if the resulting entries were relatively small in number (below 100). [Table 5.1](#) presents the results of our search on all four databases and also the final corpus assessed to search for information regarding older adults’ portrayals in the marketing

Table 5.1 The process of selection of the publications included in the analysis (2011–2021, articles)

	<i>Web of Science</i>	<i>Scopus</i>	<i>Science Direct</i>	<i>ProQuest (peer-reviewed articles, scholarly journals)</i>
<i>Keywords 1</i>	(<i>n</i> = 2119)	(<i>n</i> = 2369)	(<i>n</i> = 16382)	(<i>n</i> = 34,242)
Advertisements and technology	(<i>n</i> = 12) – using “older adults” as a filter; (<i>n</i> = 80) – using “marketing strategies” as a filter	(<i>n</i> = 65) – using “older adults” as a filter; (<i>n</i> = 403)–using “marketing strategies” as a filter	(<i>n</i> = 2907) – using “older adults” as a filter; (<i>n</i> = 4529) – using “marketing strategies” as a filter	(<i>n</i> = 6260) – using “older adults” as a filter; (<i>n</i> = 10,890) – using “marketing strategies” as a filter
Main domains	Computer Science (<i>n</i> = 836) Engineering & Software (<i>n</i> = 561) Telecommunication (<i>n</i> = 272) Business (<i>n</i> = 175) Communication (<i>n</i> = 102)	Computer Science (<i>n</i> = 1132) Engineering (<i>n</i> = 661) Social Sciences (<i>n</i> = 571) Business (<i>n</i> = 321) Medicine (<i>n</i> = 217) Mathematics (<i>n</i> = 213) Arts and Humanities (<i>n</i> = 190) Decision Sciences (<i>n</i> = 137)	Computer Science & Informatics (<i>n</i> = 2058) Business & *Consumers (<i>n</i> = 822) *Social & Behavioural Sciences (<i>n</i> = 396) Psychology (<i>n</i> = 254) Decision & Forecasting (<i>n</i> = 268) Energy Policy (<i>n</i> = 139)	Environment & Sustainability (<i>n</i> = 1248) PloS One (science, technology, and medicine) (<i>n</i> = 1016) BMJ (medical research) (<i>n</i> = 326) Scientific Report (Nature Publisher) (<i>n</i> = 324) Sensors (<i>n</i> = 322) *Journal of Medical Internet Research (<i>n</i> = 303) *European Journal of Marketing (<i>n</i> = 28)

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Table 5.1 (Continued)

	<i>Web of Science</i>	<i>Scopus</i>	<i>Science Direct</i>	<i>ProQuest (peer-reviewed articles, scholarly journals)</i>
<i>Keywords 2</i>	(n = 23)	(n = 15)	(n = 5283)	(n = 9322)
Older people and technology advertisements			Computer Science (n = 213) *Business and Consumer (n = 208) *Social & Behavioural Sciences (n = 111)	Environment & Sustainability (n = 409) PloS One (science, technology, and medicine) (n = 333) BMJ (medical research) (n = 177) Scientific Report (Nature Publisher) (n = 73) Sensors (n = 35) *Journal of Medical Internet Research (n = 172) *BNC Public Health (n = 117) *Sex roles (n = 33) *European Journal of Marketing (n = 28) *Technology & Culture (n = 28) *Gerontology (n = 23)
<i>Keywords 3</i>	(n = 21)	(n = 13)	(n = 1095)	(n = 2170)
Older people and stereotypes in advertising			*Business and Consumer (n = 87) *Social and Behavioral Sciences (n = 63)	*Sex roles (n = 43) *Environment & Sustainability (n = 70) *PloS One (science, technology, and medicine) (n = 31) *Aging & Society (n = 17)
Total articles evaluated	(n = 136)	(n = 469)	(n = 1218)	(n = 2274)
Total articles selected after the initial evaluation	(n = 16)	(n = 15)	(n = 18)	(n = 95)

* Only articles from these domains were analysed.

and advertising strategies for technology products. A broader meaning of the term “technology” has been used in our assessment going from the mechanic technologies (for example, cars and household appliances) to Internet-based technologies (e.g., websites, apps) and communication devices (e.g., tablets, computers, smartphones). Also, health-related technologies and surveillance technologies were included. We acknowledge the fact that some technologies have a broader audience, whereas others have an older audience in mind (as is the case of health-related technologies).

Corpus

Articles found in the four databases vary considerably in terms of number, with a higher number of entries in Science Direct and ProQuest databases, as compared to Web of Science and Scopus. As a result, we limited our evaluation to fields close to social sciences and business & consumer. In total, a relatively large number of articles were considered: Web of Sciences (136); Scopus (469); Science Direct (1218) and ProQuest (2274). An initial evaluation was done on all these items (N = 4097 articles) by reading the abstracts and selecting the relevant ones for the final review. First, we discarded the articles which appeared more than once, resulting in a distinct corpus of 3064 articles that were screened using mainly the abstract. In some cases, we proceeded in screening the entire article for clarifications. We selected articles based on the following criteria: (1) to include data or indications about older people and (2) to mention aspects regarding marketing strategies, advertisements, and communication strategies concerning technology. Based on the conjunction of the two criteria, a final corpus of 144 articles was reviewed by reading them entirely and selecting the ones in which information about the visual representation of older people about technology was present.

Table 5.2 presents the final corpus of 20 articles that meet the following criteria: (1) they present data regarding visual representations of older adults (irrespectively to the age used to define old age); and (2) they include in the findings data regarding the way older people were portrayed in relation with technology (the concept of “technology” was used in broader sense—from mechanic technology to communication devices). Consistent with the way we defined *visual aging*, we found articles in which older people were depicted in terms of characteristics, roles, and activities. We then coded the final corpus to reveal the way older people are visually represented in the advertising and marketing strategies for technology products and whether there is any evidence for visual ageism. Here we have to specify the fact that we investigated research studies in which visual representation of older adults have been considered regardless if the focus of those studies was advertising and marketing strategies for technology products or for different product categories (in which technology products were described as one of the categories among others).

Table 5.2 Older people representations in marketing strategies and advertisements for technology products (2011–2021)

<i>Author/year/ database</i>	<i>Forms of representation</i>	<i>Main focus</i>	<i>Technology</i>	<i>Methodology</i>	<i>Findings</i>	<i>Older people portrayals</i>
Prieler et al. (2011)/Web of Science	Video representations advertisements (Japan)	Gender representation of older people (50+)	Automobiles/ related products	Quantitative content analysis, corpus selected from five commercial TV stations in Japan	Older women are more underrepresented compared to older men (two times less present)	<ul style="list-style-type: none"> • Evidence of visual ageism in terms of roles • Stereotypic roles for women – automobiles/ related products – women in major roles 1.3 % (the lowest); men in major roles 4.5% (relatively good representation) • Older people were more present in food/ beverage advertisements (men) and in cosmetics/hygiene (women)
Baumann and de Laat (2012)/ Science Direct	Video (primetime television advertising, public and commercial broadcasting, Canada)	Gender representation of older people (50+)	Electronics, automotive & telecommunications	Quantitative and qualitative content analysis	<ul style="list-style-type: none"> • Women are more underrepresented compared to men • Older men more portrayals on jobs; older women at home • Older men – in positions with authority 	<ul style="list-style-type: none"> • Technology was associated with the presence of old men but not of old women. Still, their positions lack authority (except from electronics)

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Table 5.2 (Continued)

<i>Author/year/ database</i>	<i>Forms of representation</i>	<i>Main focus</i>	<i>Technology</i>	<i>Methodology</i>	<i>Findings</i>	<i>Older people portrayals</i>
Clarke et al. (2014)/ Science Direct	Visuals (images) (six widely read North American male-oriented magazines)	Older men representation (50+)	Watch (old technology) versus modern technology	Qualitative content analysis & visual textual analysis Corpus from Esquire, GQ Maxim Men's Health, Men's Journal and Zoomer	<ul style="list-style-type: none"> • Preference for younger men/older people rather absent • When present – celebrities • Healthy and happy 	Old technology – masculinity was associated with craftsmanship and refused to embrace technological innovation Modern technology – “smartly dressed and smiling older couple sitting in front of a laptop computer” (p. 30) – third age, successful ageing
de-Andrés-del Campo and de-Lima- Maestro (2014)/ Web of Science/ Scopus	Visuals (images) (advertisements in magazines, Spain)	Older people representation	No specific (communication technologies)	Quantitative and qualitative content analysis (advertisements aimed directly or indirectly to seniors)	<p>Products and services are very differentiated by gender</p> <p>Older people are rather absent the magazine advertisements, especially those who are very old (80+). Those 60–70 are more present</p>	<ul style="list-style-type: none"> • Institutional advertisements are more progressive than the commercial ones and also showing old people using the new technologies

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Table 5.2 (Continued)

<i>Author/year/ database</i>	<i>Forms of representation</i>	<i>Main focus</i>	<i>Technology</i>	<i>Methodology</i>	<i>Findings</i>	<i>Older people portrayals</i>
Chen (2015)/ Web of Science	TV advertisements (UK & Taiwan)	Stereotypes of old people	One category analysed (computer/ communication products)	Quantitative and qualitative content analysis	Overall older people in Taiwan were presented as more vulnerable, prone to health services and dependent; In the UK, they were presented as more healthy and fit In both cases, the portals were ageist (positive ageist in the UK; negative ageist in Taiwan)	The number of ads with older people of computer/ communications products – relatively small (5.4%) as compared with other categories of products and similar in the UK and Taiwan Health or medicine (35%) Food or drinks (22%) Beauty & hygiene (9%) Finance & insurance (8%)

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Table 5.2 (Continued)

<i>Author/year/ database</i>	<i>Forms of representation</i>	<i>Main focus</i>	<i>Technology</i>	<i>Methodology</i>	<i>Findings</i>	<i>Older people portrayals</i>
Hoppe et al. (2015)/ Web of Science	Video representations advertisements (two commercial, two public broadcasting networks in Germany)	Older people representation (50+)	Tables, mobile phones, vacuum cleaners, cars	Quantitative and qualitative content analysis (commercials having older actors)	Older people are related to food, prescription drugs and health, insurance and hygiene products – underrepresented in TV commercials but presented in positive attributes	More balanced representation of older people on different products 5.3% commercial for technology (mobile phones & vacuum cleaners) 5.3% commercial for cars-some were presented in commercials associated with technologies used for health services (e.g., tablets)
Loos et al. (2017b)/ ProQuest	Video representation (digital game, Netherlands)	Older people representation	Digital games	Semiotic and narratology	Rigid distinction between “digital natives” and “digital immigrants”	The impact of “digital immigrant” metaphor in the way older adults relate with the digital world

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Table 5.2 (Continued)

<i>Author/year/ database</i>	<i>Forms of representation</i>	<i>Main focus</i>	<i>Technology</i>	<i>Methodology</i>	<i>Findings</i>	<i>Older people portrayals</i>
Prieler et al. (2015)/ Web of Science	Video representations advertisements (Japan)	Older people representation	Home electric appliances/ audio-visual equipment	Quantitative content analysis, corpus selected from five commercial TV stations in Japan	What has changed between 1997 and 2007 Older people are more present; presented in more favourable way, but still in minor roles	<ul style="list-style-type: none"> • Evidence for visual ageism (roles) • More present in advertisements for food and beverages • No differences in the presence of older people in advertising on technology products between 1997 and 2007 (4.8% versus 4.9%) • Small percentage of commercials depicting older people & technology (below 5%)
Prieler et al. (2017a) / Web of Science	Video representations advertisements (Japan)	Gender representation of older people	Home electronic appliances/AV equipment, automobile/ related products	Quantitative content analysis, corpus selected from five commercial TV stations in Japan	What has changed between 1997 and 2007 Gender differences were more present in 2007 than in 1997	The presence of older people in advertising about technology even less in 2007, compared to 1997

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Table 5.2 (Continued)

<i>Author/year/ database</i>	<i>Forms of representation</i>	<i>Main focus</i>	<i>Technology</i>	<i>Methodology</i>	<i>Findings</i>	<i>Older people portrayals</i>
Prieler et al. (2017b)/ Web of Science	Video representations advertisements (Hong Kong, Japan, South Korea)	Older people representation (50–64; 65+)	Mobile phones or providers Automotive/ transportation	Quantitative content analysis, corpus selected from main commercial TV stations in all three countries	Older people are highly underrepresented Older men clearly outnumber older women. • Older people tend to be shown in major roles (especially men)	Number of commercials in which people are associated with technologies varies between the three countries Mobile phones (0% Hong Kong, 5.2% Japan, 14.7% South Korea) Automotive (0% Hong Kong, 19.3% Japan, 8.5% South Korea)
Vulpe (2017)/ ProQuest	Video representation (advertising, Romania)	Older people representation (65+ age display)	Tablets, smartphones and computers Internet-based technologies	Qualitative content analysis	• 5 portrayals of older adults, among which <i>high-tech elderly</i> – least represented in the corpus	<i>High-tech elderly</i> category – commercials which portrayed old people who were familiar with technology and the use of digital devices • Older people repre- sented in the private sphere. Technology was incorporated into the lifestyle stere- otypically associated with older people

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Table 5.2 (Continued)

<i>Author/year/ database</i>	<i>Forms of representation</i>	<i>Main focus</i>	<i>Technology</i>	<i>Methodology</i>	<i>Findings</i>	<i>Older people portrayals</i>
Bentley et al. (2018)/ ProQuest	Older people critics of visual representation in advertisements (UK)	Marketing strategies for older adults	Telecare technologies	Semi-structured individual interviews (65+)	<ul style="list-style-type: none"> • Strategies should be focused on benefits and not on risks of using telecare • Positive messages are more appreciated 	Advertising should present less stigmatised options than presenting older people as technological retrogrades
Persaud et al. (2018)/Web of Science/ Scopus/ ProQuest	Video advertisements (on websites)	Gender representation	Technology advertisements from top technology companies: Apple, AT&T, Hewlett-Packard, Verizon, Microsoft, Comcast, Dell, Intel, and Google	Quantitative and qualitative content analysis Company's websites were used to select the videos	Elderly characters, both male and female – least visible characters	<ul style="list-style-type: none"> • Association between technology masculinity, youth and whiteness • “Older men and women are not shown using technology, instead they appear to be indifferent to its use and existence” (p. 149) • Elderly characters are always accompanied by younger characters • “In scenes with elderly characters, technology is nowhere to be seen and/or the activities these characters engage in do not require its use” (p. 149)

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Table 5.2 (Continued)

<i>Author/year/ database</i>	<i>Forms of representation</i>	<i>Main focus</i>	<i>Technology</i>	<i>Methodology</i>	<i>Findings</i>	<i>Older people portrayals</i>
Christensen (2019)/ ProQuest	Visual representation of (images on a website) Denmark	Photos of older adults	Website of an advocacy group for older people	Visual analysis (qualitative & narrative)	Digitalisation and computer use are presented as enjoyable pastime & an activity which requires attention	Only two photos with older people in digital contexts depicting only men
Kowalewska, K. and Grodzki, E. (2019)/ ProQuest	Video representations (prim time commercials US & Poland)	Older people representation (55+)	Online finance/ social network sites/phone services	Qualitative content analysis Commercials from public TV in Poland & ABC and CBS in the US	Women prevailed in Poland and home & cooking activities Men prevailed in the US and diverse activities	Older people are more associated with drugs, food & financial services Less present in association with technology/more present in the US
Monteiro Machado and Pedro Sousa (2019)/Web of Science/ ProQuest	Video Advertisements on Facebook & YouTube (Brazil)	Stereotypes of old people	No specific (communication technologies)	Qualitative content analysis	Positive representations but also ageism: <ul style="list-style-type: none"> • Disconnected from reality • Difficulty in using technology and in social interac- tions – old fash- ion clothing • Typical body posture 	<ul style="list-style-type: none"> • Older people repre- sented losing touch with reality, hav- ing difficulties with technology

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Table 5.2 (Continued)

<i>Author/year/ database</i>	<i>Forms of representation</i>	<i>Main focus</i>	<i>Technology</i>	<i>Methodology</i>	<i>Findings</i>	<i>Older people portrayals</i>
Vermeer et al. (2019)/ ProQuest	Visuals (images) on websites for surveillance technologies	People with dementia	Surveillance technologies (products from the UK, Sweden and the Netherlands)	Quantitative & qualitative content analysis	Portrayal of people with dementia as a “problem to be managed” has been – people with dementia in the same class as wallets, keys, young children, dogs or prisoners	<ul style="list-style-type: none"> • The social imaginary of the fourth age • Products are solely designed for and used by carers • Older people with dementia are disregarded as human technology users
Muñoz (2020)/ Web of Science	Video (primetime television advertising, Puerto Rico)	Older people representation	Technology is not specific & automobiles	Quantitative and qualitative content analysis (two weeks, four TV channels)	<ul style="list-style-type: none"> • Stereotypic representation, mostly in commercials about medicine, food, finances 	<ul style="list-style-type: none"> • No presence in commercial about technology • Modest presence in commercial about automobiles
Vermeer et al. (2020)/ Web of Science/ Scopus	Video representation advertisements (UK, Sweden, Netherlands)	People with dementia	Surveillance technologies	Qualitative content analysis/semiotic discourse analysis	People with dementia are seen as objects and tracked as children, pets and possessions	<ul style="list-style-type: none"> • Only one person was represented as interacting with technology • Older people with dementia are disregarded as human technology users
Freiesleben et al. (2021)/ ProQuest	Visual representation of older people with cognitive difficulties by business experts	Marketing strategies for older adults	Locative technologies/ assistive technologies	Focus groups <ul style="list-style-type: none"> • Flyers of two commercially Available GPS watches were discussed 	Product advertising in a stereotypical way – an important barrier	Advertising messaging and visuals should be non-stigmatising, stressing the value for optimising the autonomous mobility

Our analysis offered a general image of the type of studies in which such topic was approached (main focus and methodology) and also about what type of technology was associated with older adults (as resulting from the studies we analysed).

Findings

Evidence for visual ageism in marketing strategies of technology products

The studies included in the final corpus of analysis (see [Table 5.2](#)) show evidence of visual ageism, particularly when we consider the roles older people are playing in the description associated with different technologies. For example, Prieler et al. (2015) noticed that older adults' visual representations in the technology advertisements presented in Japanese commercial television channels show no change during ten year-time (1997–2007) and that older people, in general, are depicted in small, peripheral roles. Furthermore, Prieler et al. (2017a) noticed that older people tend to be even more underrepresented in commercials regarding technology products when they compare 1997 with 2007. The same was found by Baumann and de Laat (2012) when they studied primetime television advertising on both public and commercial broadcasting in Canada: when older people were present in commercials about technology, they were placed in positions that lacks authority (except for electronics). We will discuss further that there is some type of technologies that are more inclined, in the advertising and marketing strategies, to be associated with older adults.

Although visual ageism was more evident when older people's roles were analysed, there is evidence of visual ageism in terms of characteristics associated with them as technology users – stereotypic descriptions of older adults as being no-technologically skilled or non-preoccupied with technology. Still, such depictions are more common to older women than to older men and are very common when it comes to older people having cognitive impairment.

Studies in which gender roles were examined (Baumann & de Laat, 2012; Prieler et al., 2011, 2017a) show the fact that older women tend to be more stereotypically visually represented as associated with beauty and hygiene products (Prieler et al., 2011) and they are less associated with technology products, as compare to older men (Baumann & de Laat, 2012; Christensen, 2019; Prieler et al., 2011, 2017a, 2017b). Also, other studies show evidence of the association of technology with masculinity, at least when older people are portrayed (Christensen, 2019; Clarke et al., 2014). As Persaud et al. (2018) mentioned, technology tends to be associated with masculinity, youth, and whiteness.

Besides the gender differences in the portrayals of older people in relation to technology, visual ageism is merely present when talking about older adults with cognitive impairment. Some of the studies investigated the representation of older people with dementia in relation to technology (Vermeer

et al., 2019; Vermeer et al., 2020) and they concluded that older people with dementia are disregarded as human technology users. Instead, they are represented as a “problem to be managed” by technology and objectified by putting them in the same category as wallets, keys, children, dogs or prisoners. Visual ageism in the case of older adults suffering from cognitive impairment seems to be even stronger than for older adults in general. The technology products, in such situations, are solely “designed for” and “visualised as” used by carers, whereas older people with cognitive difficulties remain “the objects” to technology. Vermeer et al. (2019) described the process of visual ageism in such cases as resulting from a social imagination of the fourth age.

The visual ageist representation of older people with cognitive difficulties is admitted by business experts when they talk about locative and assistive technologies (Freiesleben et al., 2021). The focus group discussions with such experts revealed that they are aware of the fact that the advertising industry is using stereotypical representations of older adults for such products, and they also estimate that this might be even an important barrier in marketing for assisted living technologies. Interestingly enough, they coin for non-stigmatising visuals, stressing the value of assistive technologies for autonomous mobility.

The visual representations of people disentangling with technology are also common for older adults in general, even the portrayals are not as explicit as in the case of older people with cognitive difficulties. As Loos et al. (2017) noticed, referring to online games, there is a rigid distinction between “digital natives” – the young and “digital immigrants” – the older persons, in the marketing strategies. The same study underlined the impact of the “digital immigrant” metaphor in the way older people are represented in the digital world and with the new communication and information technologies. The impact of the “technology immigrant” metaphor is also found in the study of Monteiro Machado and Pedro Sousa (2019) on video advertisements distributed on Facebook and YouTube in Brazil: older people were presented as losing touch with reality or having difficulties in using technology.

In their analysis of technology advertisements from top technology companies (using websites of Apple, AT&T, Hewlett-Packard, Verizon, Microsoft, Comcast, Dell, Intel and Google), Persaud et al. (2018) found that “older men and women are not shown using technology, instead, they appear to be indifferent to its use and existence” (p. 149). They also noticed that when older characters are present, they are always accompanied by younger characters (who normally play an expert role). Also, when such video representations have scenes in which only old characters are presented, “technology is nowhere to be seen and/or the activities these characters engage in do not require its use” (p. 149).

Not all studies show portrayals of older adults as unskilled or disentangled with technology. For example, the study of Vulpe (2017), analysing video representations of older adults in advertising presented in Romania, focusing on tablets, smartphones, and computers, found that one of the portrayals of

older adults is “high-tech elderly” – familiar with the digital devices. However, the author mentioned the fact that such portrayal is the least common in the corpus she analysed and when such characters appear, they are represented in private spaces and not in public ones. Therefore the conclusion was that *high-tech elderly* visual representation reinforces lifestyle stereotypes associated with older adults.

Still, we lack studies in which older people’s perceptions are researched asking them to express their views on the visual representations of older people in commercials and marketing strategies about technology. We found only one article in which such an aspect was investigated (Bentley et al., 2018), focusing on telecare technologies and using semi-structured interviews with people 65 years and above in the UK. This particular study confirmed the fact that older adults have a critical perception of advertisements regarding telecare technologies by considering them as a way of visually representing older adults as being technological retrogrades. The same study indicated that older adults would like marketing strategies in this sector to focus more on positive messages, on benefits, and not on risks and should present a less stereotypical portrayal of older adults.

Type of technologies associated with older adults

When looking at the type of technologies older people are visually associated with in commercials and marketing strategies, the results of studies analysed here show the fact that they tend to be more linked with mechanical technologies (for example, cars), with electronics and general with old technologies, at least in the advertisements where they are more present, and in prominent roles (e.g., expert, main characters), or depicted positively. In many cases, such associations with old technologies are typical for older men but not for older women. Our review shows that, in the case of old technologies, the association with masculinity is more explicit as compared to the new technologies. Prieler et al. (2011), for example, found that video representations of older adults in advertisements in Japan had significantly more men in major roles (4.5%) in association with automobiles and related products than women in major roles (1.3%). Baumann and de Laat (2012), analysing primetime advertising at public and private TV broadcasting in Canada, also found that electronics, automotive, and telecommunication were more associated with the presence of older men but not of older women. They also revealed the fact that in the case of older men, their presence in association with electronics was accompanied by authority, which was not the case for automotive or telecommunication products. Muñoz (2020), using an analysis of primetime advertising in Puerto Rico, found that older adults are absent from the commercials on technology in general, but they show a modest presence in commercials for automobiles.

Also referring to television advertisements, Chen (2015) found that the number of ads with older people in computer and communication products

(new technology) was relatively small in the UK and Taiwan (5.4%), as compared to other categories of products (for example health and medicine – 35%, food, and drinks – 22%). The same was found in Japan (Prieler et al., 2015) – where the percentage of older people in technology-related advertisements was below 5%. In this particular study, rather old technologies were considered: home electric appliances and audio-visual equipment. Prieler et al. (2015) also showed the fact that the percentage of older adults remained relatively unchanged (below 5%) over ten years (1997–2007). They later mentioned that the association between older people and technology products even decreased in 2007, compared to 1997 (Prieler et al., 2017a), when they analysed three types of technologies: home electronic appliances, audio-video equipment, and automobile.

In a study conducted by Clarke et al. (2014) using visual images from North American male-oriented magazines, the visual representation of older people with old and new technologies is better illustrated. The authors explicitly analysed watches (as old technology) versus laptops (new technology) and the way older people were visually represented. They found that in the case of old technology, the association was more with masculinity and craftsmanship – as an opposition and a refusal of technological innovation, whereas the modern technology was visually represented in couples – people smartly dressed and smiling in front of the laptop/computer (p. 30) – typical exponents of successful aging rhetoric.

Visual ageism and contextual aspects: The need for further developments

When analysing how older people were depicted in advertising and marketing strategies of technology products, we found some evidence that would need further exploration.

First, our findings indicate that when studying visual representations of older adults in advertisements and marketing strategies, gender issues appeared and older men tend to be more present and associate especially with old technology, as compared to older women (Christensen, 2019; Clarke et al., 2014). In addition, older men appeared more often in authority positions in such advertisements than women (Baumann & de Laat, 2012). Still, the fact that visual ageism in such cases is not only gendered but also associated with whiteness (as claimed by Persaud et al., 2018) was not investigated (at least not in the studies we revised here). It is worth exploring to which extent visual representation of older persons in associating with technology holds some nuances in regards to characters having different ethnic and racial backgrounds. Even the absence of such characters in commercials and marketing strategies about different technology products could be an interesting finding.

Second, the corpus we analysed here is quite rich in terms of countries in which those studies have been conducted: commercials from the Western

world, but also from Asia, South America, and Eastern Europe, but it was not the purpose of the current chapter to illustrate differences of visual ageism for technology products between different countries. The list of the countries presented in [Table 5.2](#) resulted directly from the selected articles, and it is not necessarily relevant to infer something about country differences. Still, visual representations of older adults in marketing strategies and advertisements about technology products might be quite different from one country to another, possibly about values associated with old age in a respective country and also to the role different technologies might have played in that society during the years. Three examples from our corpus point out the importance of considering the country context in future analysis.

First, in the study of Kowalewska and Grodzki (2019), in which commercials presented on television in Poland and the US were compared, the authors found that older people were more present with technology products (online finance, social network sites and phone services) in the US than in Poland.

Second, the study conducted by Hoppe et al. (2015) investigated the video representations of older adults in advertisements presented in Germany (public and commercial broadcasting networks). Both new technologies (tablets, mobile phones), but also more traditional mechanic ones (cars, vacuum cleaners) were analysed and the authors found a more balanced representation of older adults on different technology products (about 5% for each), with no particular indication of an association of older adults with old technologies. Indeed, when it was the case of the new technologies (e.g., tablets) – these were more associated with the health domain (stereotypical for older adults), but the portrayals of older adults with technology, in general, indicated more positive images, which “technology can be learned”.

The third example, Prieler et al. (2017b), presented the results from a content analysis on video advertisements in three Asian countries: Hong Kong, Japan and South Korea and the results show noticeable country differences. For example, older people were present in mobile phone advertisements in 14.7% of the corpus in South Korea, 5.2% in Japan and 0% in Hong Kong. Also, in the case of automotive, older people were present in 8.5% of the corpus of South Korea, 19.3% in Japan, and 0% in Hong Kong. We could speculate on the role of mobile technology in South Korea or the Japanese tradition in the automotive industry. Usually, we found no explanation for country differences in the studies regarding the association of older adults with some technologies more than with others and also no systematic preoccupation to compare different cultural contexts.

One important result is the fact that with only two exceptions (Prieler et al., 2017b; Vulpe, 2017) in which also the visual representations of older adults over 65 years of age were considered, in all the other studies, we are talking about people 50 years and above – so relatively young-older. Note that in some studies, the age was not specified. This means that our findings indicate the visual representations of relatively young older adults in

advertisements and marketing strategies of technology products but are not an indication of how the oldest-old are visually represented. Consequently, the two studies of Vermeer and collaborators (2019, 2020) are the only analysis of the visual image of the fourth agers in advertisements on technology – the oldest-old are not the users of technology but the “objects” of technology surveillance and assistance, with no autonomy and power of decision. Indeed the two studies show the visual representations of older people with cognitive difficulties, but they indicate how fourth age might be visually imagined by the specialists in marketing when they promote different technological products for this age group. Also, our findings indicate that we are probably facing a relative absence of older old characters from the visual representation of technology products (see Ivan & Cutler, 2021). Marketing specialists might have a relatively young audience in mind when they envisage strategies to promote different technology products and 50+ could be used as a threshold in defining old age, and not 65+ (which is a retirement age in many countries). Marketers could ignore the oldest old audience as they normally perceived people 50 years and above as being simply an “old and homogeneous” group – an idea largely criticised in the current literature (see, for example, Ivan et al., 2020).

Also, we noticed that the common methodology of the studies we reviewed was content analysis (qualitative and quantitative), whereas in some studies, semiotic analysis or visual analysis was used (Clarke et al., 2014; Vermeer et al., 2019; Vermeer et al., 2020). Indeed this is the preferred approach when considering the visual representation of older adults in commercials (see Loos & Ivan, 2018), but the lack of triangulation in the studies we presented here poses serious limitations on how to generalise the findings. In only two studies, interviews were used: (Bentley et al., 2018) – in which they analysed the perceptions of older adults on the telecare technologies advertisements; and Freiesleben et al. (2021) – in which marketing experts’ opinions were investigated by the use of focus groups. It might be that older adults are more sensitive to some visual portrayals presented in technology product commercials than another.

Understanding visual ageism lies not only in describing the content of visual representations but also in revealing how this content is perceived and evaluated by the older adults themselves. The same is valid for marketing experts: some visual representations of older adults might be only implicit social imagery of old age, whereas others might be strategic deliberated actions targeting certain consumers.

Nevertheless, we noticed the imbalance distribution of the corpus in the fourth databases we searched here for the analysis: Web of Science, Scopus, Science Direct, and ProQuest (see [Table 5.1](#)). In the case of Web of Science, we started from $n = 2119$ entries – the smallest number from the four databases and we end up having 11 articles in the final analysis (see [Table 5.2](#)), which will be more than half of our corpus. By comparison, 9 articles from our final corpus were from the ProQuest database, when starting from an

initial $n = 34,242$ entries. Note that we found some articles in more than one database and this is mentioned in [Table 5.2](#), which describes the main findings. The relatively small number of articles we analysed here is not a limitation of the current study but rather a representation of the lack of interest in the way older people are visually represented in studies on marketing for technology products. Ultimately, this might be an indicator of a relatively stereotypical view of the way researchers from social sciences investigate visual representations of older adults: mainly in the advertising content presented on television, using a content analysis classic approach.

Conclusions

The current chapter describes the way older adults are visually portrayed in advertising and marketing strategies about technology products. We found evidence of visual ageism: older people are associated merely with mechanic technologies (e.g., auto motives) and not with new technologies. When they are visually represented in using different technology products, they tend to be accompanied by the young (who play advisory roles), playing secondary roles or they are represented in stereotypical settings (for example, at home) and stereotypic domains (technology for health).

Although the depictions in terms of characteristics vary a lot, from visual content (videos or photos) in which older adults are described as technophobic, and unskilled in using technology, to visual content in which they are represented as being able to handle the new communication devices, some nuances of visual ageism need to be considered. First, the intersection between ageism and sexism: we found more positive visual portrayals of older men as compared to older women when technology advertisements were considered: men tend to be more represented in connection to technology and even “experts” of some technologies – for example, electronics or cars. Still, the “expert” role is normally associated with traditional technologies or mechanic ones. On the contrary, older women tend to be absent from such portrayals and when visually represented – they are more associated with new technologies in couples, or the technology is nowhere to be seen.

Second, when technology is associated with older adults, it is part of the general successful-aging discourse: relatively young older adults (55+), happy in couples, being successful in mastering the new devices but also their aging process. We found a contrast between such portrayals of relatively young old and the portrayals of older adults with cognitive difficulties, for example – who were disregarded as human technology users by putting them in the same category as wallets, keys, children, dogs or prisoners. In such cases, the technology is “visualised as” used by carers, while older adults remain completely out of it.

Third, the current investigation opens the discussion of the importance of social and cultural values and the role of prescripts, as advertisements are often reflections of the societal discourses, in this case on what it means

to be old and what the role is of technology in different parts of the world. Although some studies in the corpus we analysed here showed differences between the marketing strategies they investigated comparatively, in two or three countries, the choice of the countries was *ad libitum* and there was hardly any attempt to offer in-depth explanations for the differences found between countries. This is also because the majority of the studies used qualitative and quantitative content analysis – an approach that leaves little room for such explanations. In some instances, we advanced some reflections over the country differences, more in a speculative way, arguing, for example, that finding more older adults in commercials for cars in Japan than in other neighbouring countries might have to do with the history and the importance of the car industry in Japan. In many of the analysed studies, the use of interviews with potential consumers or with the experts who participated in the creation of the advertisement campaigns would have helped to move from speculations to consistent explanations.

Nonetheless, the current chapter shows there is some preoccupation to investigate the way older people are portrayed in the advertising domain, and this has been shown by the relatively large number of studies we begin with when we search in the four databases. Still, when we narrowed the search to studying older adults' visual portrayals in advertisements and marketing strategies about technology, the corpus remained rather small (144 entries during the past 10 years), showing there is a relatively little preoccupation with the topic.

We could wonder why it is even important to study visual ageism in advertisements about technology. For sure, the distinction between technology laggards (the old) and the technology savvy (the young) might have negative consequences in a nowadays society marked by the pervasiveness of new technologies and an increased percentage of the older population. At least in the few studies in which marketing specialists were approached (see Freiesleben et al., 2021 in our corpus), we have seen that experts are aware of the importance of including less ageist portrayals of older adults when technology is visually presented and being more age inclusive. Also, older consumers expect this to happen (see Bentley et al., 2018) and they generally criticise the stereotypical representations of older age in marketing strategies. We believe that more studies focusing on how different advertising visual content is perceived by older consumers will complement understanding the content analysis approaches. The need for such triangulation in data might be important to understand the interplay between different models of aging and different social representations of technology and the way they are reflected in the choice of a particular visual content.

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