

FREIE BEITRÄGE

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Active Voices and Analogue Natives: German and Japanese Media Representations of Digital Technologies and Older Adults during the Covid-19 Pandemic

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Abstract

This article presents a comparative analysis of media coverage of digital technologies and older adults from March 2020 until February 2022 in the German newspaper *Frankfurter Allgemeine Zeitung* (FAZ) and the Japanese newspaper *Asahi Shimbun* (AS). We identified two views of the impact of the increasing use of technologies on older adults: digital services as an opportunity (e.g. virtual medical consultations), and as a risk (e.g. services may exclude people unfamiliar with devices or applications). Three common narratives were identified: a) the pandemic exposed a lack of digital inclusion of older adults, b) the lack of care personnel poses challenges, and c) older adults feel disadvantaged especially in financial transactions. While AS featured diverse voices of older adults and presented “senior digital role models”, FAZ reported on seniors’ strengths as “analogue natives”. In conclusion to the findings, we offer recommendations for building a more inclusive digital society.

Keywords: comparative newspaper analysis, COVID-19, digital technologies, Germany, Japan, media discourse, older adults, senior role models

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Introduction

Since the World Health Organization's (WHO) declaration of SARS-CoV-2's spread as a pandemic on 11 March 2020 and the authorities' accompanying call for social distancing, there has been a particularly pronounced digital push at all levels of society—including in the healthcare sector (Golinelli et al. 2020; Gallistl et al. 2021; European Parliament 2022), as regards public transportation (Fumagalli et al. 2021) and in the workplace (Wang et al. 2021). In East Asian countries, the digital detection and monitoring of Covid-19 cases was commonplace, situating them at the forefront of efforts to employ digital technologies as a means of mitigating the effects of this global health crisis (Nageshwaran et al. 2021).

During the pandemic, Japan initiated significant digital reforms to modernise its public administration and enhance service delivery. Prior to the events of early 2020, the Japanese government system had been slow to adopt digital strategies across the board; systematic reformation of its institutions ensued, however, once the pandemic took hold (Brummer and Ueno 2024). This digital push at all levels of society entailed challenges of inclusion (Wanka et al. 2023), with the lockdowns and other restrictions imposed from March 2020 onwards being unfavourably looked on by older adults¹ due to accompanying social isolation (Rodrigues et al. 2022). Despite online interventions aimed at easing this painful experience, such efforts were received positively only when people had access to technology or were provided with it (Rodrigues et al. 2022; Schwaninger et al. 2023).

In this context, media representations of older adults have played a crucial role in shaping public perceptions thereof, influencing societal attitudes and legitimising political responses related to ageing and digital transformation. Particularly during the pandemic, such portrayals either reinforced age-related stereotypes or presented older adults as capable and adaptable participants in digital environments. In line with this, Joyce and Loe (2010) conceptualise older adults as 'technogenarians' who creatively use and adapt technological artefacts to meet their needs, rather than passive consumers.

Given the accelerating digitalisation of social life, it is crucial to examine how older adults are represented in public discourse. These portrayals not only shape societal attitudes but also influence the inclusivity of policy responses in ageing societies. This article thus analyses how digital technologies and older adults were discussed in two national newspapers during the first two years of the Covid-19 pandemic: Germany's *Frankfurter Allgemeine Zeitung (FAZ)* and Japan's *Asahi Shimbun (AS)*. Research Question 1. *How are digital technologies discussed in relation to older adults?*

1 In both Germany and Japan, 'older adults' refers to people aged 65 and above. In the present article the terms older adults, older people, seniors, and elderly are used interchangeably.

Research Question 2. *What are common trends and differences in the media coverage of older adults and digital technologies in the cases of FAZ and AS?*

We argue that national media outlets hold considerable influence in constructing social realities, shaping public discourse and informing political decision-making (Van Aelst et al. 2012; Pei et al. 2022; Rasi 2022). We furthermore understand media discourse as a narrative framework which heavily sways the interpretation of contemporary events and processes (Wahl-Jorgensen and Schmidt 2019: 262). Through qualitative analysis, our study hence investigates how respective newspaper articles from Germany and Japan discuss digital technologies and older adults, identifying both shared trends and distinct differences herein. This provides important insights for developing inclusive and barrier-free digital societies. Such societies require not only accessible technological infrastructures but also intergenerational commitment and collaboration (Waldenberger et al. 2022: 14).

Germany and Japan are often selected for comparative analysis, with both being industrialised democratic countries seeing similar demographic trends regarding ageing and social policy (e.g. Lützeler and Conrad 2002; Coulmas and Lützeler 2011; Waldenberger et al. 2022). While Japanese society has a bigger share of an ageing population, related challenges are also expected to manifest in other countries like Germany in the near future. Regarding digital competitiveness, Germany was ranked 19th place in 2022, while Japan ranked 29th in the same year (IMD 2022). The importance of comparative analysis and intercultural research is also stressed in the mission statement of the German Institute for Japanese Studies (Deutsches Institut für Japanstudien), which focuses on culture, society, economy and politics in the modern era. We see the Covid-19 pandemic as a fitting opportunity to analyse how a specific topic, digital technology and older adults, was represented in the German and Japanese media, as exemplified by two national newspapers.

We begin by reviewing related literature on media representations of ageing and digital technologies. We then present our methodological framework and introduce the selected case studies (*FAZ* and *AS*). Finally, we offer a comparative analysis of opportunities and risks here, as portrayed in the two newspapers examined, before in closing providing recommendations on how to foster greater digital inclusion for older adults.

Related work

In response to the restrictions imposed in the wake of Covid-19's onset, authorities in both Europe (WHO 2020) and Japan (MHLW 2020) sought to support and protect older people living alone, as social-distancing policies often led to a loss of face-to-face family and intergenerational contact (Marston et al. 2020). The use of information and communication technologies (ICT) helped to maintain communication between family members in this context. During the pandemic, then, there were a number of interventions to promote social connectedness and reduce isolation among older adults in care contexts, some of which were well-received

(Carros et al. 2022; Schwaninger et al. 2023). However, challenges remained in terms of older adults' access to technology, due to lower digital literacy or a lack of related pre-existing habits and daily routines (Gallistl et al. 2021; Schwaninger et al. 2023).

As an indicator of how the digital- and social inclusion of older adults has been realised since, mass media is a domain in which practices of representation, underrepresentation, misrepresentation or marginalisation can be observed (Chen et al. 2022). Media discourses about ageing and older adults are known to influence both individual perceptions and the public view thereof at large. Positive stereotypes can be associated with active ageing (WHO 2002) and healthy ageing (WHO 2024), or even (though presently outdated) successful ageing (Rowe and Kahn 1997)—as reflecting more general trends in a society existing within a particular spatio-temporal framework. Negative depictions pertain to ageing being portrayed as decline, which tends to be implicit in biomedical models which focus on physical or cognitive issues in this regard (Wangler and Jansky 2023). The WHO's definition of health as 'the state of complete physical, mental and social well-being and not merely the absence of disease or infirmity' (1946: 1) emphasises the necessity of taking a holistic view of the individual within their given social context.

Cautioning against the invocation of unhelpful generalisations, in recent years several studies have pointed to the phenomenon of 'digital ageism': that is, the preconception that older adults are less competent in this domain (Manor and Herscovici 2021; Rosales et al. 2023). This stereotypical portrayal can be also found in advertising strategies for products seeing older adults to be more associated with mechanical items (such as cars or watches) rather than with new technologies, a phenomenon Ivan and Loos call 'visual ageism' (2023: 88).

Representations and perceptions of age are also linked to cultural factors. For example, Chinese media discourse during the pandemic tended to portray older adults as passive recipients of care, reflecting a biomedical model of ageing (Zhang and Liu 2021). Another study discussed the label 'angry silver' applied to South Korean older adults involved in digital political activism, who are often portrayed as being digitally incompetent and aggressive (Oh 2023). In the United States, the pandemic exacerbated ageism, with older adults increasingly coming to be deemed a burden on society (Lytle and Levy 2024). In an AARP study of 1,116 media images of older adults, it was found that the latter were not only underrepresented but when so cast in a more negative light—namely as dependent and disconnected, while rarely being shown together with technology (Thayer and Skufca 2019).

Given differences in the representation of older adults across world regions, an interesting cultural comparison can be made between Japan and Germany in this regard. This may help to explain the different media representations of age and ageing found in their respective discourses, particularly in relation to technological affairs: Japan is the oldest society in the world, with 29 per cent of the population being age 65 or over in 2022 (Cabinet Office/Government of Japan 2023), compared

to an equivalent figure of 22 per cent for Germany (DeStatis, Statistisches Bundesamt 2024). Smartphone usage among older adults in Japan, meanwhile, has also increased rapidly in recent years, especially during the pandemic, going from 55.6 per cent prevalence in 2019 to 70 per cent two years later among survey respondents aged 60–69 (MIC 2021).

On a regulatory basis, there were differences in how Japan and Germany handled Covid-19's spread (Bajaj et al. 2021). Japan issued two emergency declarations (nationwide in April 2020 and partially in February 2021) and implemented so-called 'mild' or 'voluntary' lockdowns (Watanabe and Yabu 2021), advocating self-restraint (*jishuku*) on the part of citizens (Suzuki and Sakuwa 2024). Germany, contrariwise, focused on strict lockdowns, with containment measures implemented such as shutdowns, mobility restrictions and social-distancing rules (Franzke and Kuhlmann 2024).

Regarding the Japanese response, Kümmerle and Waldenberger refer to the government's approach as 'consensus-driven', meaning based on soft regulation to honour the interests of both the individual and the general public as far as possible. To reduce the spread of the virus, personal health data was aggregated and anonymised in seeking to track infection pathways within clusters—that is, rather than relying on mass PCR tests. The Japanese strategy relied on citizens consciously choosing to avoid crowded or closed places, instead of implementing strict lockdowns in a top-down manner (Kümmerle and Waldenberger 2024: 605). To mitigate against the social isolation which intensified during the pandemic, the government furthermore encouraged local welfare volunteers (*minsei-iin*) and neighbourhood associations to maintain non-physical contact with those living alone (Waldenberger et al. 2022). As Japan did not employ a proactive testing policy, the number of cumulative confirmed Covid-19 cases per million people was much lower there (3,474) than in Germany (29,942) as of 7 March 2021. Japan also recorded a much lower number of cumulative confirmed Covid-19-related deaths per million people (65.27) compared to Germany (859.16) (Suzuki and Sakuwa 2024: 211–212).

Methodology

This article explores how, during the first two years of the pandemic, digital technologies were discussed in the German and Japanese media respectively. Qualitative content analysis (QCA) is applied here, a research method which is empirically grounded and exploratory in nature (Krippendorff 2019; Kuckartz 2019). Qualitative approaches are 'interpretive', meaning that they require a close reading of text and the formulation of new narratives; Krippendorff referred to this as being 'interactive-hermeneutic' (2019: 22–23) in style. We chose QCA of a German national newspaper versus a Japanese counterpart primarily because of the differences in terms of demographics, technology adoption and responses to Covid-19 seen in the two countries. As the Japanese population has a larger share of people aged 65 and above, we expected a stronger representation of topics related to ageing

and older adults in the *AS* sample. The data have been coded and analysed using the software MAXQDA.

FAZ and *AS* are similar in that they are newspapers of record which reach a highly educated audience in their respective countries. *FAZ* is the second-largest broadsheet newspaper (after *Sueddeutsche Zeitung*) in Germany and reaches a daily audience of 880,000 readers. The overall largest newspaper in Germany, *Bild* (7.8 million readers per day), is a tabloid featuring only very short articles and was therefore not considered for analysis. Among *FAZ*'s readership, approximately 26.9 per cent are 60 or over. Similar to *AS*, its readers tend to be highly educated, with 53.9 per cent holding a degree from a university or graduate school (FAZ.net, 2024). According to the newspapers' websites, *AS* employs roughly 2,000 people (Asahi.com 2023: 18); the equivalent number for *FAZ* is stated to be about 450 employees (FAZ.net 2024). As one of the oldest newspapers in Japan, *AS* circulates more than 4 million newspapers per day (morning and evening editions) (Asahi Shimbun 2024: 14). It is the second-largest newspaper (after *Yomiuri Shimbun*) both in Japan and indeed worldwide by print circulation. According to surveys conducted in 2023, segmented by age the largest group of *AS* readers are 60–69 (19.1 per cent thereof), then followed by 50–59-year-olds (17.6 per cent). Its readership tends to be educated, with 55.3 per cent holding a degree from a university (Asahi Shimbun 2024: 14).

According to the Digital News Report (2020a; 2020b; 2022a; 2022b), the share of Germans who trusted the news increased in the first three years of the pandemic from 45 per cent (2020) to 50 per cent (2022); in Japan, those figures were 37 per cent (2020) and 44 per cent (2022) respectively. The share of people who 'trust in news I use' was found to be larger among German respondents (59 per cent in 2020 vs. 57 per cent in 2022), but interestingly slightly smaller among their Japanese counterparts (36 per cent in 2020 vs. 43 per cent in 2022). Regarding brand trust, *FAZ* had an approval rating of 56 per cent in 2022 (*Süddeutsche Zeitung* = 60 per cent, *Bild* = 20 per cent); for *AS*, that figure was 42 per cent in the same year (*Yomiuri Shimbun* = 47 per cent, *Mainichi Shimbun* = 44 per cent).

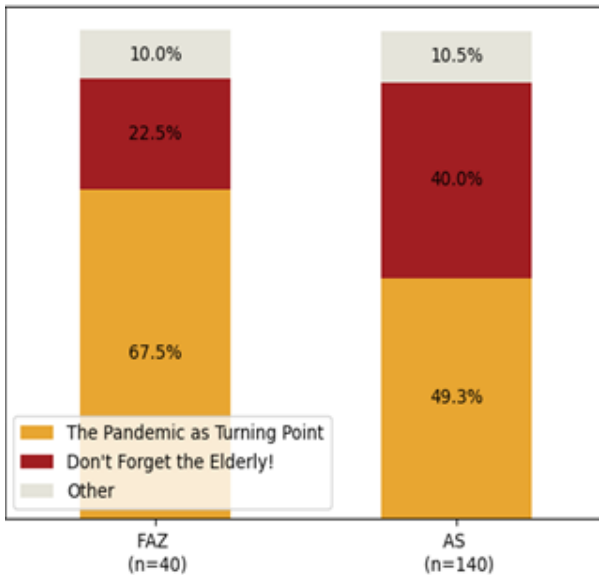
FAZ and *AS* media texts were analysed separately by native speakers of German and Japanese. The search queries for *FAZ* were based on the keywords 'senior*' and 'digital*'; 'smartphone' or 'robot*'; 'Internet' or 'AI'. For *AS*, search queries were conducted using the keywords 'older adult(s)' (*kōreisha*); 'ICT' or 'technology' (*tekunorojī*); 'AI' or 'robot' (*robotto*); 'smartphone' (*sumaho*) or 'app' (*apuri*). Covered here was the period from 1 March 2020 through 28 February 2022, representing roughly the first two years of the pandemic. Sampling was investigative, leading us to new media texts as we progressed in our analysis. We used a data-driven (inductive) approach with open coding until saturation occurred. Therefore, the resulting units comprise a population of texts which contain information relevant to answering our research questions per an in-depth QCA approach (Miles and Huberman 1995: 29). The sample size for *FAZ* and *AS* varied as we reached different points of data saturation. We continued sampling until no

more new texts relevant to the research questions were found. We also included *letters to the editor* in our corpus, given our interest in focusing on the discussion of digital technologies in the context of older adults.

Findings

We now present our findings related to Research Question 1. The selected media texts were grouped into two overarching categories we call ‘mottos’. The first motto “The Pandemic as Turning Point” frames digital technologies as opportunities and speaks to their future potential in the context of ageing societies (section 4.1.). The second motto “Don’t Forget the Elderly!”, meanwhile, highlights concerns that older adults have been—or are at risk of being—left behind during the digital transformation. Figure 1 below shows the proportional distribution of these two distinct mottos.

Figure 1. Dominant mottos in *FAZ* and *AS*



Our aforementioned assumption about the likely stronger representation of topics related to ageing and older adults in the Japanese sample proved true: For *AS*, a total of 140 media texts were included in the corpus. The *FAZ* sample is less than one-third of the size, with 40 texts. We note that the *AS* texts were usually shorter than their *FAZ* counterparts, with letters to the editor comprising on average 405 Japanese characters; longer articles were made up of on average 2,100 characters meanwhile. In *FAZ*, a typical item came in at 6,000 to 7,000 characters overall. However, this

difference in length is also explained by the fact that in Japanese script a single Chinese character (*kanji*), or a combination of two different ones, can also express a whole word.

Looking closer at the column categories of the German and Japanese media texts, the *FAZ* corpus showed a strong concentration in the sections Economy (30 per cent), Companies (15 per cent) and Politics (12.5 per cent). In *AS*, the sections with the largest shares of relevant articles were Opinion (24.8 per cent), followed by Society (15.6 per cent) and Economy (12.7 per cent) respectively.

The choice of terminology also indicates how digital engagement among older adults is conceptualised. *FAZ* addressed the ‘digital divide’ often mentioned in the literature (Ragnedda and Muschert 2023), using terms like ‘digital gap’ (*digitale Spaltung*) (13/8/2020) and ‘digital discrimination’ (*digitale Diskriminierung*) (23/2/2022). Digital literacy was described as ‘digital sovereignty’ (*digitale Souveränität*) (13/8/2020), ‘technology sovereignty’ (*Technologie-Souveränität*) (21/4/2020) or ‘to autonomously use the net’ (*internetsouverän*) (26/6/2020). In *AS*, an often-mentioned term was ‘digital divide’ (*dejitaru kakusa*) (3/12/2020; 11/6/2021; 7/9/2020; 10/7/2021), with alternatives being ‘information divide’ (*jōhō kakusa*) (12/5/2021), ‘digital information divide’ (*dejitaru jōhō kakusa*) (31/8/2021) or ‘wall/barrier of digitalisation’ (*dejitaruka no kabe*) (10/7/2021).

The discursive framing and thematic positioning of older adults within German and Japanese national media is illustrated hereby. Notably, *FAZ* featured no articles in the Society or Opinion sections, suggesting a more technocratic or institutional understanding of ageing and digitalisation. In contrast, *AS* presented a more reflective and socially embedded discourse on these themes. The choice of terminology also indicates how digital engagement among older adults is conceptualised. While *FAZ* articles also hinted at aspects of digital competence with keywords like ‘digital sovereignty’ or ‘to autonomously use the net’, examples in the *AS* corpus rather stressed the digital divide and wall of digitalisation. These terms and their respective contexts portray how digital inequality is understood and communicated to the general public, shaping societal perceptions of older adults either as digitally excluded individuals or potentially autonomous actors.

Motto 1: The Pandemic as a Turning Point

Texts in this category described the impact of the Covid-19 pandemic on technology usage. Included here were increased media consumption, the emergence of new solutions such as online medical consultations and the adoption of innovative habits such as ordering food online. The articles in question also discussed ICT usage and its future potential against the backdrop of an ageing society.

For the *FAZ* corpus, 67.5 per cent of texts fell into this category, with their column inches outlining the potential for older adults to benefit from digital technologies’ adoption (see Figure 1 above). Here, different areas of application were named, marking the heterogeneous needs of older adults – yet also framing that demographic

as a more general concept in the context of an ageing population (i.e. older adults were rather viewed as a homogenous group and not further distinguished). Articles described how the pandemic had affected daily routines and how the use of ICT helped support social interaction, or compensate for the loss of it in person. Meetings, whether personal or work-related, were noted to have shifted to online platforms such as Facetime, Skype and WhatsApp, with them seeing increased usage across all age groups.

According to a report by *FAZ* on 22 June 2020, some senior users had experienced video calls for the first time. The pandemic led to a surge in the popularity of streaming platforms, as well as catering and food-delivery services. However, other industries suffered a loss of customers and economic downturn (27/6/2020). The German daily highlighted the significant growth of digital channels and the increasing availability of online services, including medical consultations (19/5/2021; 3/5/2021). Additionally, the potential for ICT usage in an ageing society was emphasised, particularly during the pandemic. For older adults in need of healthcare and living in rural and especially remote areas, applications such as teletherapy and telemedicine proved valuable (17/1/2022; 24/9/2021). Digital solutions in healthcare, such as the ‘corona alerts’ for health data and therapeutic video games, were also mentioned (1/12/2020; 9/7/2020). Integrating robots and automated machines was proposed as a solution to combat labour shortages in care contexts (24/1/2022). However, it was also emphasised that there remained significant need for investment in digitising offices and ministries too (25/1/2022), alongside accelerating healthcare digitalisation (24/9/2021). Despite the promising aspects hereto in an ageing society, as well as for other domains such as the economy, ethical considerations were also voiced (15/3/2020; 15/6/2020).

Similarly, *AS* reported on the ‘digital push’ during the pandemic, with 49.3 per cent of the examined texts falling into the category ‘Pandemic as a Turning Point’ (see Figure 1 above). Examples listed were the on-site inspection of facilities which introduced ICT services to facilitate video chats between family members via smartphone or tablet (8/4/2020; 1/6/2020), or which installed big screens for care-facility residents (14/5/2020). Various digital initiatives aiming to address the physical frailty and social isolation of older adults were reported on. These included remote lunch tables, stretching exercises demonstrated via video chat (23/5/2020) and making available videos showing how to prevent frailty (11/5/2020; 1/4/2021).

Additionally, some applications had evidently become more popular in *AS*, including health-check apps (4/2/2021) and meal-delivery platforms (3/2/2021)—also being used by older adults. The chat apps mentioned in the articles were Zoom and LINE (a messenger app widely used in Japan). The *AS* discourse emphasised how technology is crucial to the healthcare sector, particularly for helping meet older people’s needs, as it facilitates independent living and holds great promise for improving daily life for this demographic. The texts in *AS* stressed the potential of ICT in an ageing society, highlighting technologies such as AI for carrying out

administrative tasks and real-time health monitoring, as well as touchless care services during the pandemic (5/7/2020). Some articles also introduced innovations for people with dementia, such as a shopping app and AI able to analyse a person's walking patterns (15/2/2022; 1/3/2020; 2/11/2020). ICT was found to be associated with reduced administrative costs. Robots were identified as having the potential to perform healthcare tasks such as distributing food, moving patients, washing them and delivering medicine to these individuals as well (19/3/2022; 12/3/2021; 2/3/2019; 12/3/2021). In response to the Covid-19 crisis, for instance, a disinfection robot was introduced (10/1/2021). However, the debate over the balance between protection and surveillance was also discussed in *AS*: the introduction of such entities as a 'protection robot' raised privacy concerns (3/1/2021).

In both of the examined newspapers, the potential of digital technologies to improve the lives of older adults was noted and anticipated, particularly in the areas of care and healthcare, thereby fuelling the discourse on older adults as individuals in need (Neiertz et al. 2023). Furthermore, older adults were presented as one homogeneous group in the context of an ageing population—that is, they were not explicitly distinguished by socio-economic status or age group in either country. Implicitly, the different applications of digital technologies listed also showcased the range of needs existing among older adults as a diverse population, with examples including matters of social interaction (also intergenerational communication), safety, healthcare, telehealth for remote areas as well as care support (also for those employed in this field).

Motto 2: Don't Forget the Elderly!

This motto encompasses articles speaking to the manifold challenges faced by older adults in accessing certain services due to limited digital competence, as well as the other disadvantages besides which these individuals face in a digital society. In *FAZ*, 22.5 per cent of texts fell under this motto. In *AS*, the share thereof was even bigger at 40 per cent.

An article in *FAZ* titled "Old, but no idiot" ("Alt, aber kein Idiot"; 3/2/2022) reported on an 80-year-old Spanish senior's petition against discrimination in banking, advocating for analogue solutions. Together with another article 'Right to an analogue life' ('Recht auf analoges Leben'; 12/2/2022), this sparked discussions in subsequent 'letters to the editor' regarding digital discrimination and the importance of accessible technology for social participation (23/2/2022). Digital products were criticised for not being well-designed and causing social exclusion for those who do not use a smartphone. *FAZ* also offered advice on how to include seniors in the job market by emphasising their strengths and potential to future employers (18/9/2023; 11/12/2021), urging them to overcome stereotypes suggesting that older adults are 'old-fashioned', 'slow to change' or 'unproductive members of a company'. *FAZ* also reported on initiatives aimed at assisting seniors with digital services and addressing their needs during the pandemic.

During the study period, the German Federal Ministry of Finance was cited as having introduced the so-called ‘tax pilot’ (‘Steuerlotse’) initiative in *FAZ* to support seniors with digital tax submissions (12/6/2021). Another initiative called “Solidarity despite Corona” (“Solidarisch trotz Corona”) was noted to help isolated seniors with the carrying out of tasks like grocery shopping and medication collection (29/3/2020). According to *FAZ* (30/10/2020), seniors face significant challenges as regards online banking, indicating the need for better services. As another report outlined (26/6/2020), only a small number of these individuals were found to be confident in their use of Internet services, highlighting seniors’ related struggles—in our context, specifically with the Covid-19 warning app. This was deemed especially the case among those who are not highly educated. The former social minister of Saarland emphasised the importance of in-person access to public services being offered: ‘Citizens have the right to be able to do this in person’ (12/2/2022). Related articles highlighted the various areas of daily life wherein older adults are at a disadvantage due to their lack of digital literacy or non-possession of a smartphone.

In the *AS* discourse, similarly, limitations to participation facing older adults were discussed in the context of commercial promotions when accessed online (27/1/2021), using the Covid-19 tracing app (18/6/2020) as well as the vaccination app (23/12/2021), and difficulties with carrying out financial tasks—for example, due to the prevalence of cashless services (25/3/2020; 2/6/2020) and online banking (8/10/2020). Furthermore, *AS* featured more elderly voices in its columns. One-third of the texts were letters to the editor, including one with multiple comments from readers on the topics of digital society, ageing at large and depopulation. It was emphasised that older adults must not be left behind—especially in peripheral regions, including remote islands (5/10/2020; 8/11/2020).

The government’s responsibility to reach each and every person was also highlighted (15/1/2021). An 80-year-old reader expressed difficulty in understanding IT-related vocabulary and reported issues with her computer and inability to contact an operator, calling for better solutions (28/9/2020). *Smartphone classes* (*sumafo kyōshitsu*) were mentioned more than once as a means to counteract the disadvantages and vulnerabilities faced by older adults. Participants learned here how to use such devices, starting from switching them on to connecting to the Internet and later using map apps and social media platforms. One of the missions behind these classes was to raise awareness of potential safety issues online and introduce measures against Internet fraud. The latter was a common topic, with five articles reporting on cases where older adults were deemed easy targets – such as fraud in the realms of online support and cryptocurrency (10/2/2021; 5/4/2021; 20/4/2021; 13/7/2021; 18/11/2021). In conclusion, media texts within this category advocate for a more inclusive society, emphasising the importance of leaving no one behind, how older adults are more vulnerable to social isolation and the imperative of non-digital options being available.

Three related trends common to both *FAZ* and *AS*

We now present our findings as regards Research Question 2. The corresponding texts allowed us to identify three main points of commonality (section 4.3.) and two key differences (section 4.4.) between *FAZ* and *AS* in this context. An overview here of is presented in Figure 2 below.

Figure 2. Overview of commonalities and differences in *FAZ* and *AS*

Trends	<i>FAZ</i>	<i>AS</i>
<i>Lack of digital inclusion regarding older adults</i>	✓	✓
<i>Lack of care personnel creates new challenges</i>	✓	✓
<i>Older adults feel disadvantaged in everyday life, especially in financial matters</i>	✓	✓
<i>Older adults as active voices</i>	✗	✓
<i>The strengths of 'analogue natives'</i>	✓	✗

Common trend 1: Lack of digital inclusion regarding older adults

In both Germany and Japan, the pandemic highlighted the challenges posed by the digital divide in times of crisis by revealing the extensive social exclusion experienced by those who are not digitally literate. Before the events beginning early 2020, digitally inactive people (including older adults) did not have a specific reason to use such technologies if they did not wish to do so. During this global health crisis, however, the use of digital services—such as those providing pertinent information via apps—was perceived as a demonstration of solidarity in the fight against the SARS-CoV-2 virus. The *FAZ* article “Age is no barrier to the smartphone” (“Alter schützt vor Smartphone nicht”, 11/1/2022) reviewed senior-friendly features as regards both Apple and Android operating systems on these devices. Senior readers were advised to use their phones to communicate with relatives. Similarly, *AS* pointed out that smartphone use eased constraints on intergenerational communication during the pandemic. In response to the question: “Do you think you have practised filial piety?”, a senior *AS* reader commented: “I cannot see the face or the condition of my parents via their [stationary] phone, so I do not know exactly how they are. I should have taught them how to use LINE while they were still able to use a smartphone” (27/2/2021).

Common trend 2: Shortage of care personnel creates new challenges

Media texts in both *FAZ* and *AS* emphasised the crisis now faced in the healthcare sector, namely a shortage of care personnel. During the pandemic, such workers were deemed indispensable. Technological innovations like self-check health apps,

virtual medical consultations, the utilisation of AI for health data, care robots and other innovations were viewed as likely to help relieve the burden on medical and care staff in due course.

In an article entitled “What medical doctors want” (“Was sich Mediziner wünschen”, 21/9/2021), the Chief Executive Officer of The Charité noted: “If we are unable to digitalise our health system within the next five years, others will do this for us”, hinting at the fact that the pandemic had revealed weaknesses in Germany’s healthcare infrastructure amid the prospect of growing competition from the US (e.g. Amazon Care) and China in this domain. Articles in *AS*, meanwhile, frequently referred to the current shortage of care personnel and the prospects of new technologies addressing this situation—for example, via an excretion-detection sensor (4/12/2021) or robots more generally (18/2/2021; 9/7/2021; 22/10/2021). In one interview, a social worker highlighted an intriguing topic here: “If technology could facilitate excretion care without touching the person, it would be interesting to see how it would affect our care work and the issue of smell” (2/3/2021).

Common trend 3: Older adults feel disadvantaged in everyday life, especially in financial matters

One of the digitalisation processes most readily noticeable in everyday life is that concerning financial transactions. With the pandemic and social distancing, paying by card instead of cash limited personal contact. Banking was also increasingly carried out online, often via apps.

In Germany, the number of savings-bank branches decreased by almost 12 per cent in the study period: from 8,318 in 2020 to 7,326 by 2022 (Deutsche Bundesbanken 2023). Older adults are particularly affected by the closing of bank branches. This was evidenced by the following *FAZ* headline: “Financial sector neglects older bank customers digitally” (“Finanzsektor vernachlässigt ältere Bankkunden digital”; 30/10/2020).

Turning to Japan, from 2001 through 2021 the number of branches of financial institutions declined by 20 per cent (including regional banks, savings banks and similar) (PRI/MOF 2022: 12). Two *AS* articles reported that using analogue account passbooks would become subject to a fee, but older adults aged 70 and over would receive the paper versions free of charge (17/9/2020; 8/10/2020). Another contentious fee was the one introduced for exchanging coins for banknotes (*AS* 25/3/2021). Further criticism articulated included that of supermarket self-checkout systems, which seniors can find difficult to use. There was also dissatisfaction expressed concerning shopping apps which promised special discounts and offers, with seniors feeling disadvantaged by not knowing how to obtain these online (25/4/2021; 23/1/2022).

Two points of difference between *FAZ* and *AS*

Apart from the commonalities just outlined, we also identified two key differences between *FAZ* and *AS* in their respective handling of these topics. These points refer specifically to the question of agency and the strengths of older adults beyond digital literacy.

Older adults as active voices in *AS*

Older adults were significantly more represented in the Japanese case study. With the recurring implicit warning “Don’t forget the elderly!”, 15 per cent of the examined texts—a considerable number—were authored by older adults themselves as letters to the editor, providing a forum for first-person accounts of own experiences, views and concerns. These personal narratives provided multifaceted images of seniors and their use of technology, some reporting enthusiastic engagement with these tools while others felt marginalised within the digital landscape.

AS has a long tradition of publishing readers’ comments within the section *Opinion*; letters to the editor are a similarly popular genre within its pages as well. Who the authors of the latter are is indicated by the listing of their name, profession, prefecture of residence and age. Information regarding their seniority is therefore prominently indicated at the beginning of each comment.

Such items are not that commonplace in *FAZ*, although it does have a column called *Letters to the editors* (*Briefe an die Herausgeber*). It is included in the sections related to readers’ comments, for example as concerning *Politics* or *Finances*. These letters are longer comments comprising about 400 words. When specific news articles spark a reaction from readers, multiple comments (shorter ones of about 60 words and longer ones of 400 plus) are clustered together. The letters to the editor are only cited by name (sometimes accompanied by the person’s academic title and/or place of residence). The age of the author can only be identified, then, if explicitly mentioned in the comment itself.

In *AS*, older people were also more visible as interview partners, commenting on the digital transformation and raising concerns regarding hardware mainly designed for young users and not themselves. For instance, one famous author of fiction (born 1932) pointed out an impediment to smartphone usability which older adults are bound to encounter eventually:

I have a smartphone, but I cannot see the letters on the monitor very well. To enlarge the letters, you have to delicately use your fingers. But in old age, it’s hard to move the fingers, so the monitor is difficult to see. Are developers thinking about these aspects? (10/7/2021)

The active voices of older adults were also present in the context of positive experiences with digital technologies. In an *AS* article on social robots, for example, a 76-year-old widow commented that hers was like a conversation partner, stressing the importance of communication and interaction especially during crises such as

the pandemic. One of the developers of the robot was himself an older adult aged 69, with him stating that the robot did not have a camera because of users' privacy concerns (8/1/2022). In contrast, in a *FAZ* article (15/6/2020) featuring the robot Pepper stationed in a senior centre, the site representative recounted how relatives who come to visit ask to see what their (old-age) father is always talking about; this is done instead of presenting first-person accounts of older people themselves regarding their interaction with the robot.

AS also gave the spotlight to 'digital role models' among the older generation such as Wakamiya Masako (born 1935), the prominent "oldest game-app developer" (15/1/2021; 10/2/2022); the senior head of a non-profit organisation active in enhancing their peers' digital competence (11/6/2021); a senior art teacher who first started to use her iPad at the age of 70 (25/5/2021); and a senior housewife who became a successful YouTuber (14/9/2021). These portraits contribute to a more nuanced representation of older adults, helping Japanese society to move beyond the ageist viewing of them primarily as individuals in need. Instead they are depicted as active users enjoying digital tools, with such technology contributing to their well-being. Other articles highlighted the latter's growing popularity in the context of leisure pursuits among older adults, with examples including the online application to take part in marathons (19/10/2020) and hiking expeditions (17/8/2021).

The strengths of 'analogue natives' in *FAZ*

In contrast to *AS*, where some older adults were introduced as role models in the context of digital competence, we found examples in the *FAZ* corpus of them being portrayed as such in the context of analogue social prowess. As illustrated by the headline "No fear of the telephone" ("Keine Angst vor dem Telefon", 25/7/2021), younger digital natives were reported as lacking experience in professional communication via this device because they are used to asynchronous modes thereof instead. One reported initiative involved older adults participating in role play, whereby they would act as an employer talking on the phone to a young candidate in a staged job interview. One presenter stressed the importance of the analogue world thus: "Digital balance means to combine the empathy of the real world with the efficiency of the digital". An editor of the *Technology Review* was quoted as saying: "You cannot solve conflicts with a chat tool, that does not work", emphasising how technology is not a universal solution and that face-to-face communication is an ideal strategy for problem-solving. In another *FAZ* article, a senior sports teacher stressed the importance of physical activity for older adults, with sports clubs also fulfilling social needs as digital courses cannot entirely replace social face-to-face interaction (25/7/2021). Those concerned were additionally portrayed at other times as 'angry' citizens protesting against digital trends, especially the closing of bank branches (23/2/2022) and when advocating for their 'right to an analogue life' (12/2/2022).

Discussion and recommendations

FAZ discussions mostly took place at the meta level, tending to focus on the potential of digital technologies to facilitate connectivity between people during the pandemic and to reduce costs in the healthcare sector. While the digital inclusion of older adults was suggested as vital in a general sense (with the majority of said articles appearing in related micro- and macro-level sections), no concrete strategies were proposed on how to actually achieve this. Critical comments put forth spoke to the imperative of technology not replacing humans and how society should ensure the elderly's digital inclusion.

AS provided specific examples of how to include older adults on this front in Japan. We identified the issue of technology being designed primarily for younger people (e.g. difficulties with swiping and enlarging the fonts on the smartphone's display). A discussion on mobility support was closely linked to Japan's problem of rural depopulation, but also to the situation in the healthcare sector. These statements align with existing research on older adults' experiences with the digital transformation in Germany (Frennert and Östlund 2014), but there was little representation hereof in the examined *FAZ* discourse.

For older adults to participate in digital society, specific experiences need to be discussed—such as those related to issues of access, privacy and trust (Fischer et al. 2014, Schwaninger et al. 2021; Paccoud et al. 2024a). These participatory aspects were more prominent, with the majority of articles belonging to the *Opinion* and *Society* sections of *AS*—albeit themes not similarly detected in our *FAZ* corpus. In addition, recent research suggests that seeking to reduce ageism at the level of politics and society can be a highly effective method of changing perceptions of older adults: namely, so that they are seen as contributors to, rather than a burden on, the collective (Lytle and Levy 2024).

Recommendation 1: Practical strategies are needed to include all members of society in the digital transformation, through analogue solutions, access to education, inclusive IT design and by raising public awareness.

A lack of access to digital technologies can arise for many different reasons, for example professional background, age-related experience or usability. Inspired by our *AS* analysis, we suggest lifelong education should specifically target providing access to digital society for seniors. Education and lifelong learning have been identified as key strategies to promote inclusion and overcome barriers to participation here. This could be fostered, for instance, through a living lab approach (Haan et al. 2021); participatory or community-building research projects (Schwaninger et al. 2020 & 2021; Bieg et al. 2022; Prinzellner et al. 2022; Münter et al. 2023); and by making smartphones, tablets and other digital tools both more accessible and usable and tailored to particular cultural contexts (Schwaninger &

Zhan 2023). When assistance with daily activities is needed (such as with grocery shopping, as depicted in our results), formal and informal care workers alike should be included in the convening of smartphone classes—as highlighted both in *AS* and previous academic work (Haan et al. 2021)—in combination with community healthcare interventions (Duncan et al. 2021).

The need to provide non-digital options was specifically mentioned with examples of 80-year-old seniors; however, reference was also made to the ‘general’ population of older adults. Therefore, we also recommend analogue alternatives to be accessible, given the existing disadvantages, for example, in handling financial matters. The use of analogue solutions should not lead to social exclusion. Further, inclusive design is needed to craft digital tools for older adults in need of care (Carros et al. 2022; Schwaninger et al. 2023). We also suggest raising awareness through public-outreach campaigns, including workshops and science communication on topics related to an inclusive digital society and anti-ageism. These should also actively portray the diversity of older adults as a social group, as well as their multifaceted, varying needs.

Recommendation 2: More agency and representation vis-à-vis older adults, as a highly diverse population, is recommended in media discourse.

Older adults were qualitatively and quantitatively less often represented in *FAZ*. Instead, they were talked about either from an expert perspective or an economic point of view alone. Additionally, seniors were portrayed herein as a rather monolithic group, per an ageist depiction not uncommon to media accounts of their lives (Holladay and Coombs 2004; Giles et al. 2021). For the most part, those in question were not further distinguished by age group or socio-economic status— aspects which could certainly influence usage of digital technologies (Paccoud et al. 2024b). The diversity of older adults was rather overlooked, with these individuals homogeneously depicted according to various digital contexts and corresponding needs, from learning how to use smartphones, to complaints about lack of access, care requirements and support with daily life.

In *AS*, older adults were more actively included in the media discourse. This also corresponds with the fact that almost one-quarter of this corpus belonged to the *Opinion* section. The Japanese daily presented older adults as a more diverse social profile, while also depicting their different levels of technology adoption and hinting at the so-called ‘digital grey divide’ (Sin et al. 2021). In line with the WHO’s (2017) *Global Strategy and Action Plan on Ageing and Health*, we consider it important to present a multifaceted picture of older adults to combat pervasive misconceptions informed by ageism.

Policy frameworks such as *Active Ageing* (WHO 2002), *Healthy Aging* (WHO 2024) and *Active and Healthy Ageing* (European Commission 2022) have advocated an active societal role for seniors for many years now. Related studies in Human–

Computer Interaction emphasise how ageing should not be viewed as a diminishment of function on the biomedical or cognitive level, thus encouraging the design of digital technologies helping promote an active lifestyle (Harley 2011; Fitzpatrick et al. 2015). Rather than viewing them as passive consumers, older adults can be seen as proactively utilising, adapting and designing technology to fit their needs (Joyce and Loe 2010). This also requires them being ascribed an appropriate level of agency and satisfactory voice within the public discourse.

In *AS*, older adults were actively represented in the form of being directly quoted. In *FAZ*, contrariwise, older people's worries were rather talked about from the journalist's third-person perspective. As mentioned, the *AS* corpus also included more letters to the editor written by older adults—with them being more present as social actors in consequence (Carvalho 2008: 168). On the other hand, *FAZ* depicted these individuals as excelling in terms of analogue skills when compared with the younger generation. This analogue aspect is highly significant, since technology is not always the solution in the sense of an 'interventional logic', as Wanka et al. (2023) point out. Thus, we recommend that decision-makers in the domains of media policy and organisational culture should seek to further active representations of older adults and their diverse needs, taking *AS* discourse as an exemplar here.

In summary, this QCA of the digital push induced by the Covid-19 pandemic has further illustrated how digital technologies and older adults are represented in German and Japanese media. While there has been a call for promoting seniors' digital literacy in both countries' contexts, Japan—as the world's most aged society—can serve as a particular role model here. This is due to how these issues are spoken of in *AS*'s pages, especially concerning its holistic perspective on and more active role ascribed to older adults.

Limitations

This study is based on QCA of media representations of older adults in two national newspapers: *Frankfurter Allgemeine Zeitung* (Germany) and *Asahi Shimbun* (Japan). In taking a qualitative approach, it does not aim for statistical generalisation but rather interpretive insight into prevailing discourses during the Covid-19 pandemic and beyond. Findings serve to illustrate how national media can act as role models in shaping narratives on ageing and digitalisation. While both newspapers are considered influential, structural and contextual differences must be acknowledged. *AS*, with a broader journalist base and a more progressive editorial stance, differs from *FAZ*, which is comparatively more conservative in orientation and scope. A broader media sample—including regional outlets, newspapers with different political or thematic foci, and digital-only formats—would be necessary for more general observations to be made. Adopting a broader time frame spanning both the pre- and post-pandemic periods would also help shed light on transformational changes afoot. In addition, Japan's larger population and older demographic structure are reflected in its media landscape, potentially leading to

greater visibility and sensitivity towards related issues. Despite these limitations, our study provides important insights into the media representation of older adults in the context of the accelerated digitalisation coming with the pandemic. In particular, Japan—as the society with the largest share of older adults to date—offers a promising role model here on the basis of *AS*'s holistic and active portrayal of older adults, highlighting pathways towards more inclusive and age-responsive media narratives.

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