

Reconsidering Conveniences: Domestication of On-Demand Digital Services in Everyday Consumption

(Preprint)

Abstract:

On-demand digital services provide convenient and fast fulfilment of consumption. From their emergence in media, on-demand digital services have expanded in ride-hailing, food delivery, and retail, bringing considerable environmental implications. While there is abundant research on digitalisation in various consumption sectors, few have identified the interrelations between digital services across multiple consumption sectors and their implications for consumption behaviours. Using domestication theory, this paper explores the interconnections between households' cognitive, practical, and symbolic learning of various on-demand digital services to understand how they shape households' consumption. Findings from qualitative interviews in the United Kingdom show linkages between how households learn about, use, and develop meanings around online media, food delivery, ride-hailing, and retail services. The popularity of on-demand media services, the horizontal expansion of digital ecosystems, and the personalised algorithmic recommendations influence the adoption of digital services in retail, food delivery, and ride-hailing. The cognitive, practical, and symbolic learning across the services have engendered shared expectations of convenience, speed, and abundance. Finally, the learning processes determine households' domestication of digital services, their use, and the resulting consumption behaviours as households reconfigure and readapt the various services to fit the moral economy of the household. Recognising the similarities and interdependencies in how households engage with various digital services in media, retail, food, and ride-hailing helps us understand digitalisation as an overarching transformation of consumption.

Key messages:

1. Households' learning of various on-demand digital services are interrelated.
2. On-demand digital services increase households' expectations of conveniences, speed, and abundance.
3. Cognitive, practical, and symbolic learning influence households' understandings of and responses to convenience.
4. The learning processes determine households' domestication of digital services, their use, and the resulting consumption behaviours.

Keywords/short phrases: domestication; online food delivery; e-retail; ride-hailing; convenience

Introduction

Digitalisation has reshaped consumption norms (Cochoy et al, 2020; Dulsrud and Bygstad, 2022), including speeding up consumption processes and intensifying expectations of convenience and immediacy (Tomlinson, 2007; Ritzer and Miles, 2019). This is explicit in digital services that market themselves as on-demand services that provide fast fulfilment of consumption (Taylor, 2018). Dablanc et al. (2017) defined on-demand as deliveries within two hours after order. However, the arbitrary time limit excludes many services organised on the same logic of delivery speed. We adopt a broader definition of on-demand digital services as various services able to quickly supply customers with products and services ordered through digital devices (Taylor, 2018; Van Der Burg et al, 2019; Lim et al, 2023).

The most prominent examples are on-demand or streaming services for digital media—movies, music, games, audiobooks, e-books, or other digital content—that facilitate an “on-demand culture” or the shared expectation of being able to instantaneously access a large selection of digital content at any time (Tyron, 2013). The business model has spread to digital companies offering products and services at a faster speed, for example, ride-hailing, online food delivery, or retail platforms with same-day or next-day delivery (Colby and Bell, 2016; Smith, 2016; Das, 2021).

The global expansion of these on-demand digital services across the consumption sectors has important environmental implications. Despite techno-optimist claims that digital services provide a more efficient means of consumption (Jiang et al, 2024), research shows the opposite, often-overlooked negative impacts (Lehner et al, 2023). Such impacts may include rebound and induced demand (Coroamă and Mattern, 2019; Court and Sorrell, 2020; Lange et al, 2023), additional energy consumption and carbon footprint from data centres, logistics, or last-mile delivery fleets (Allen et al, 2018; Tirachini, 2020; Kang et al, 2021), and increase in packaging and waste (Escursell et al, 2021; Xie et al, 2021). Whilst these are longstanding issues in e-commerce, food, or transport services, the acceleration of provision in the on-demand model exacerbates them further (Munoz-Villamizar et al, 2021; Lord et al, 2023).

Whilst there have been increased attention to the intersection of digitalisation, consumption, and sustainability, the body of research has not reflected the interrelation and interdependencies between consumption domains. Samson (2024) showed how grocery shopping is integrated with commuting which itself adapts to home location. These complex bundles of practices in food, mobility, and housing can create pathways towards more resource-intensive consumption (Juvik and Halkier, 2023). Yet, most research on digitalisation in consumption have been focused on a single consumption domain, for example, in media (Widdicks et al, 2019; Beuscart et al, 2022), food (Fuentes and Samsioe, 2021; Stehrenberger et al, 2024), and retail (Chandra and Chen, 2019). As digital technologies are now multi-purpose devices (Blank and Groselj, 2014; Groselj, 2021) and digital ecosystems are networked (Dulsrud and Bygstad, 2022), digitalisation can bring new forms of interrelation and interdependencies to consumption practices with a transformative impact that transcends multiple consumption domains.

Responding to the research gap, we explore households’ engagements with various on-demand digital services in and across several consumption sectors (food, retail, and mobility) and how they shape consumption behaviours, particularly in response to the promise of convenience. Our objective is to identify key interrelations between households’ understanding

of and responses to the conveniences of on-demand services that could explain broader changes in consumption patterns associated with digitalisation. Understanding the habituation of these on-demand services and how they shape everyday consumption are important first steps towards tracing their environmental implications.

We will first review existing research on digitalisation and conveniences in consumption. We then anchor the research using domestication theory (Silverstone et al, 1992) before presenting our empirical work on households' domestication of on-demand digital services and its impact on their consumption. This discussion is a timely contribution as on-demand digital services continue to expand across various commercial sectors and race to expedite their delivery even more.

Literature Review

Consumption in the Digital Era

The digital ecosystem plays a greater role in everyday consumption, taking a larger share of overall purchases than offline channels (Office for National Statistics, 2025). The adoption of digital services as means of consumption are not merely functional and utilitarian processes, but embedded in people's sense of identity, aspirations, and meaning-making (Cochoy et al, 2020) while being influenced by economic, social, and structural factors, such as income levels (Groselj, 2021), relationships (Correa, 2014), or geographical availability and urban environment (Newing et al, 2022). As such, consumers are critical actors who determine how digital technologies become integrated into shopping practices (Dulsrud and Bygstad, 2022).

As people adapt digital services to fit their values and circumstances, the services simultaneously shape people's consumption patterns by framing what is available and accessible. For example, people adapt their orientation and use of online food delivery depending on their life circumstances, while the application simultaneously changes people's everyday food habits (Bissell, 2020). Meal boxes have also emerged as a convenient way for people to explore new food items or cooking routines which transform their food practices, while the meal box market itself is being reconfigured by consumers' actions and feedback (Hertz and Halkier, 2017; Fuentes and Samsioe, 2021). Similarly, on-demand media services have transformed how people access content and reconfigured their media consumption habits, while people use the services differently than intended by the platform designer (Beuscart et al, 2022) or even use additional tools like a virtual private network (VPN) to circumvent the services altogether and access overseas libraries (Meese, 2017).

The impacts of digitalisation on consumption are multi-faceted and nondeterministic, hinging on how consumers perform, accept, and integrate the service into their everyday lives (Dulsrud and Bygstad, 2022). The different trajectories of digitalisation's impact on consumption can be seen, for example, in the digital food environment. Digital food platforms can reinforce existing food practices as people use them as more convenient tools to pursue their pre-existing aspirations rather than shift to more sustainable diets (Stehrenberger et al, 2024), but they can also enable people to access greater food variation and pursue multiple aspirations, including healthy and sustainable diets (Fuentes and Samsioe, 2021).

Beyond readjusting consumption practices within its domain, digital services also reconfigure other practices that intersect with it. Tomlinson (2007, p.133) argued that the

habituation of on-demand media services can shape assumptions of instant delivery and abundance in other aspects of life. Empirical studies have also linked e-commerce or online grocery shopping to vehicle ownership and offline mobility practices (Berg and Henriksson, 2020; Blumenberg et al, 2021). Digital services themselves are increasingly interconnected, given digital platforms' horizontal cross-sectoral expansion to offer multiple products and services within a networked ecosystem (e.g., Uber offers ride-hailing and food delivery, or Amazon offers retail, media, and food delivery), which transforms the consumption experience (Dijck, 2021). This particular interconnection has been subject to great scrutiny from the perspective of market analysis (Dulsrud and Bygstad, 2022), such as in Platform Capitalism (Srnicsek, 2017) and Platform Society (van Dijck et al, 2018), but rarely analysed regarding to how people respond in their everyday consumption.

Conveniences in Consumption

Convenience has long been identified as a driving factor of consumer choice (Shove, 2003), yet its definition is still contested as it takes many forms depending on the social and cultural contexts (Jackson et al, 2018). Thus, convenience is rife with moral ambiguity, for example, 'convenience food' being associated with neglecting one's care duty or unhealthy eating. In response to the ongoing debate on definition and morality, Hertz and Halkier (2017) argued for conceptual clarity by focusing on 'convenient' as a process-term, using meal box schemes as a case study. This shift from classifying the product to analysing the provisioning process of the product makes way for understanding 'conveniencization' or how certain practices become regarded as convenient (Jackson et al, 2018:50). It also highlights convenience as an elusive goal that constantly changes in relation to the products or devices intended for it (Strengers and Nicholls, 2017).

Based on the 'process' understanding of convenience, technological innovations provide conveniences in consumption processes by reducing time (e.g., convenience food), shifting time to provide greater control and flexibility (e.g., laundry machine), or removing mental effort (Shove, 2003) which then re-orders the time-space relations of everyday life (Warde, 1999). Therefore, convenience in one aspect of consumption intersects with how people organise other activities and consumption practices, for example, convenience in food provisioning relates to working, travelling, or parenting (Jackson et al, 2018).

Convenience is central to the value proposition of digital services. Digital services enable consumption anytime, anywhere, which Roberts (2015) argues results in a culture of instant gratification. Beyond removing temporal and spatial boundaries, digitalisation also introduced new conveniences that transform the consumption experience. Jiang et al. (2013) convened a focus group with consumers and identified six dimensions of convenience in online shopping, including access, search, evaluation, transaction, possession, and post-purchase. Such affordances made possible new consumption practices, for example increased shopping return rates, with adverse resource implications (Roichman et al, 2024).

Domestication Theory

Domestication theory explores how innovations are adopted, adapted, and integrated into everyday life (Sørensen, 1996). Innovations are "domesticated"—alluding to the domestication of wild animals—as households shape the form and meaning of the innovation to fit their

identity, values, and moral evaluations while the innovation changes households' routines and practices (Silverstone et al, 1992). For example, Siles et al. (2019) traced how Netflix users personalise or adapt Netflix into their routines, while they are subject to Netflix's algorithmic recommendations. This mutually-constitutive dynamic happens within the surrounding social, economic, and cultural arrangements that households are constantly exchanging commodities and meanings with (Silverstone, 2006; Ward, 2006).

The interpretive flexibility (i.e., users develop their own meanings of a technology) interacts with the rigidity of technology script (i.e., technology scripting the proper use and limiting what can be done) through learning processes (Parrish, 2025). Sørensen identified three learning processes: 1) cognitive learning about the technology and its capabilities, 2) symbolic learning to develop meanings around the technology, and 3) practical work to change routines and habits to incorporate the technology (Sørensen, 1996, 2006). Failures or misalignment in the learning process can challenge the domestication of an innovation, as seen in the empirical study of smart home technology adoption in the UK (Hargreaves et al, 2018).

Domestication studies have also recognised digital innovations' networked and interconnected characteristics. People use multiple devices to access a service (e.g., connecting a laptop to a TV to watch a show) and use one device to access multiple services (e.g., using a laptop to watch Netflix while online shopping in between); it is these interactions that shape the domestication process of media technology (Klocke, 2023). This prevalent way of doing technology, across various digital practices, invites domestication research to move beyond a single object to a multi-device, multi-service analysis that accounts for its network characteristics (Dutton and Blank, 2014; Brause and Blank, 2020).

The networked and interconnected digital innovations add complexity to the learning process. Juntunen's (2017) study on households' adoption of small-scale smart renewable energy technologies in Finland showed how the learning processes in the domestication of different devices are linked. The case highlighted how modularity, product multi-purposing, and convenient interoperability between systems are key to the domestication of renewable energy technologies as a group, as they ease the learning process. Similarly, Søråa et al. (2021) argued that the domestication of networked welfare technology for the elderly in Norway, composed of a care robot, sensor, and mobile app, entailed learning processes with each component separately and collectively as a system and required work with and from the assemblage of devices, users, and the social surroundings of formal and informal caregivers.

Leong's (2023) study of Internet technologies and services in Cuba (i.e., wi-fi parks, intranet, and physical distribution network) further advances the idea of "networked domestication" to understand the establishment of symbolic meaning and the consequences of network components. With "networked domestication," Leong showed how the different components of the Cuban Internet introduce volatility and uncertainty around the functional and symbolic understanding of each component as well as the larger network ensemble as a product and value. In a different study, Groselj (2021) highlighted how the domestication of various devices to develop and maintain Internet access and the relationships between those devices explain the central role of the Internet in activities like communication, play, finding information, or orientation.

To summarise, the intricate interconnections of digitalisation in various consumption

sectors warrant further research, especially as they promise new conveniences that transform the consumption experience and carry resource implications. Domestication theory's concept of learning is relevant for this analysis as it can examine how users learn about, respond to, and develop meanings around the conveniences of various networked services.

Methodology

This research used a field study of on-demand digital services. We recruited households in Oxfordshire, United Kingdom to a panel for a broader research project into digitalised daily life using online advertisements, flyers, and posters on community boards. Forty-seven households were recruited for the panel. We then conducted a baseline survey and home interview to capture the participants' demographic profiles and digital behaviours. Based on their profiles, we used purposive sampling to select twenty households with varying levels of prior engagement with digital services to participate in this study. Twenty individuals from fourteen diverse households agreed to participate. Individuals ranged from 32 to 87 years old, with 11 females and 9 males (Table 1).

Table 1. Research participants

Household composition (age)	Occupation	On-demand digital services used
Adam (49) and Susan (53)	IT business partner for council and environmental planning specialist	Music, retail
Heather (34) and Michael (37)	Administrator and researcher	Media, music, games, retail
Stephanie (37) and three children (8, 6, 2)	Part-time community development coordinator	Media, music, retail, food delivery
Elena (32) and a baby	Clinician	Media, retail
Harriet (76) and Joseph (87)	Both retired	Media
Alex (74) and wife	Retired	Media, retail,
Matthew (60) and wife	Unemployed	Only use Amazon with their neighbour's help
Austin (35), Jessica (33), and a toddler (2)	Consultant and administrator	Media, music, ride-hailing, retail, food delivery
Sophia (46), Andrei (54), and two kids (17 and 9)	Nutritionist and heavy goods vehicle driver	Media, music, retail
Samantha (34) and husband (34)	Administrator and children's book author	Media, music, ride-hailing, retail, food delivery
Winnie (52) and David (55)	Freelance dog walker and retail manager	Music, retail
Patrick (57)	Retired	Media, retail, food delivery
Caroline (45), partner (51), and one daughter (14)	Teaching assistant and consultant	Music, retail, food delivery
Natalie (62)	Researcher	Media, music, retail

Names in bold participated in the interviews. All names are pseudonyms. Age of

participants were during interview.

The data collection was conducted between June 2023 and January 2024 comprising of two rounds of interview. The first interview, conducted at the participants' homes, focused on households' prior usage, experience, and expectations of on-demand digital services. We used visual tools to enable communication and represent data (Bravington and King, 2019). The visual tools helped identify examples of on-demand digital services that the households were currently using, had tried, or had heard of before to prompt households' reflection on their habits, routines, and consumption of on-demand digital services. (Figure 1).

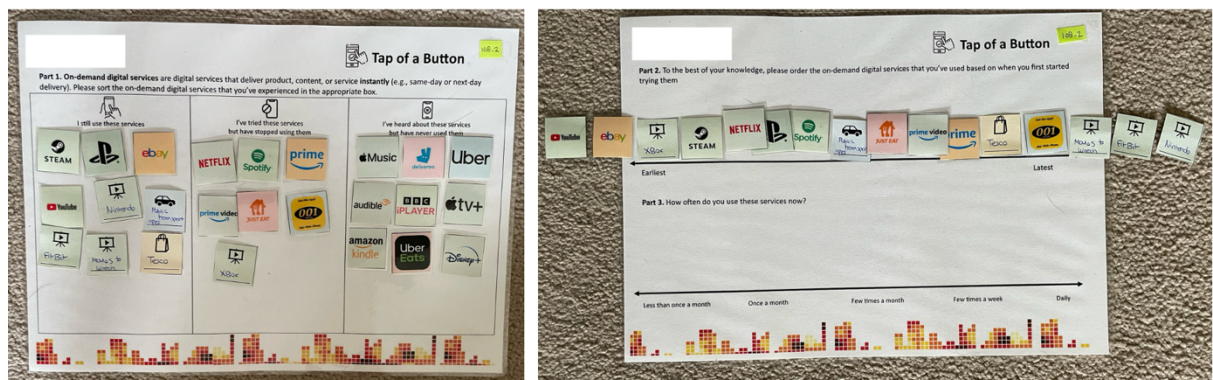


Figure 1. Example of visual elicitation tools from a household

The households were then given three-month subscriptions to on-demand digital services of their choosing which acted as participation incentive and as priming tool before the second interview. Six households opted for Netflix, six households opted for Amazon Prime, and one household opted for Audible. One household already subscribed to various on-demand digital services and was given a grocery voucher instead. After three months, we conducted the second round of interviews via a video call platform to explore their experience, reflections, and any changes from the first interview. As many households already had prior familiarity with the services, the introduction of the services cannot be considered a pure intervention between the two interviews. Despite the limitation, the (re)introduction of on-demand digital services after the first interview helped stimulate households' reflections on how they engage with the services in their everyday life and make visible the consequences that might be otherwise taken for granted.

Both interviews were transcribed, coded, and analysed thematically using NVivo. Progressive focusing (Sinkovics and Alfoldi, 2012) was used to formulate and refine themes that expand on concepts from domestication theory. We started coding key themes from domestication (e.g., practical learning, cognitive learning, and symbolic learning) which then evolved to include additional themes or sub-themes from what emerged from the interview data (e.g., interrelation between services, convenience).

To manage the unreliability of self-reporting, households were also asked to share their platform-generated usage data, such as Amazon transaction records or Netflix viewing history. However, many households were reluctant so only three households submitted Amazon transaction data and four households submitted Netflix data. These data were analysed as background information to support their qualitative interviews. In addition, as part of the

longitudinal research project, we conducted annual surveys about their digital service usage from 2022 to 2025 which were used to analyse general consistencies or changes in households described their digital habits. These complementary methods aided in validating and verifying households' self-reporting.

Findings

Cognitive learning

An essential part of domestication is learning about the technology and what it can do. Households learned about on-demand digital services through a range of sources, particularly through word-of-mouth and other social influences. For online shopping or food delivery, the social influence included a 'neighbourhood effect' of seeing increasing number of food delivery scooters, parcel delivery vans, or packaging in recycling bins in the neighbourhood. To households, these visuals signal the popularity of on-demand digital services in their surroundings, as this quote suggests:

Caroline: "I think [Amazon Prime] are delivering to quite a few places quite often, so you might see them on the same street almost every day. And they're not just going to one house on that street, they're going to three or four houses on that street."

In addition to social influence, households are influenced by their experiences with other digital services, either directly or indirectly. Directly, many digital ecosystems span multiple consumption domains which encouraged users to stay within their network (Srnicsek, 2017). Amazon is a prominent example observed among households; Austin and Jessica used Deliveroo Plus for food delivery because it was included in their Prime membership, while Heather and Michael started using Prime Music.

Beyond the immediate ecosystem offering, households were exposed to other digital services via social media or digital media platforms. Some participants recognised that the contents are a function of the algorithm based on their personal data shared across the services, highlighting the interconnectivity among digital services.

Patrick: "I'm saying friends and family, but I reckon a degree of it is the algorithm chucking stuff at me. Instagram seems to be more focused on who I am and what I'm interested in, so that's probably where a lot of my awareness comes from."

Michael: "I'd say stuff's interconnected too, though, like I watch video game stuff on YouTube that makes me then want to play stuff on Steam. So, it's not like it's all so siloed either."

Indirectly, experiences of using on-demand digital media facilitated acceptance of the business model in other sectors. Participants recalled using on-demand digital media services earlier than retail, ride-hailing, and food delivery, corresponding to the market development of

the respective services.¹ Their early use of on-demand media services primed them to try other digital services in retail, food, and ride-hailing, as they expect the services to be as “easy.” For example, Harriet was hesitant about digital services but recalled her positive experience with the BBC’s on-demand service, which encouraged her to try other digital services like eBay and then Amazon. The initial adoption and learning of digital media created favourable conditions to support the adoption of other digital services, including alleviating uncertainty and building up digital skills and confidence.

Apart from ease, households associated the various services with speed and abundance to varying degrees. For media, the instantaneous nature of on-demand or streaming services was considered a given, though households still recalled the difference with the slow experience of watching broadcast TV or renting or purchasing DVDs. For food delivery, households acknowledged the physical limitation influencing the speed of delivery.

Jessica: “When I was growing up, you'd watch a show on TV and a new episode would come out once a week and you would wait all the time. Now that everything's on demand, you have a whole season there so you can watch them with smaller intervals. So yeah, I would say maybe I have higher expectations... maybe slightly less so for meal food delivery services, because obviously that's constrained a bit more by where you're located and what's available in the place, but, yeah, definitely, I have expectations of being able to get stuff quickly and having a big selection.”

Meanwhile, the speed of delivery was still seen as a novelty for retail. Almost all households excitedly recounted their experience of having their orders delivered the next day, indicating an ongoing learning process of the new affordances in on-demand retail.

David: “Most recently I've been buying bits for this [motorhome] and then previously for an old MG sports car. You don't tend to have shops around that you can just walk into and inquire. Actually, it could be Monday night I could place an order [online], it could be here Tuesday. Ridiculously now.”

The references on speed and abundance reflect a recalibration of people’s experiences of digitally-mediated consumption relative to the previous way of doing things that were slower and limited. Despite acknowledged differences attributed to the physicality of food delivery, a common expectation emerged of digital services being a faster and easier option reflecting the on-demand’s script that explicitly promotes speed and abundance. This expectation has stabilised around media and has spread across food and retail.

While learning about the benefits of digital services, households also absorbed information about the negative aspects of on-demand services. Their concerns include the logistics and infrastructures behind fast delivery, pollution, waste, data centres’ energy use, labour conditions of delivery drivers, or market competition with local businesses. Households also confronted the business practices of “big tech” companies, particularly Amazon and Uber, questioning their tax evasion or treatment of workers.

¹ On-demand media services including BBC’s on-demand function and Youtube were founded in 2005, before Amazon Prime launched in the UK in 2007, Uber in 2012, Netflix in 2012, and Deliveroo in 2013.

Caroline: “I'm not so keen on the sort of [food] deliveries by motorbike because I think they drive quite badly and it's actually quite dangerous. If you're getting somebody driving or coming over on a petrol bike, it's quite a lot of pollution for what it is. [My partner] says he's quite environmentally friendly, but at the same time he's quite into buying things and having things delivered, which is a bit of a conflict in those two ideas. For me, I don't think it's that great... These people don't really have a base, they just kind of hang around in different shops and it's probably not a very fair way of being treated.”

The previous quote captures the multiple unresolved tensions that often occur in households' use of on-demand services, underlining cognitive learning as a dynamic and contested process in which households always recalibrate what they know about the service, what it can do, and what its impacts are. The contestation often left households feeling conflicted about their usage of on-demand digital services. As Patrick reflected on his concerns about Amazon and Deliveroo, “absolutely conflicted, but I love these things.”

Practical learning

Households learn to incorporate digital services into their daily lives by adapting their routines, habits, and practices. Participants listened to Spotify during morning walks or watched Netflix in the evening. Routines were also developed around particular events, for example, ordering online food delivery whenever a family member visited, using ride-hailing when travelling, or subscribing to Amazon Prime only during the holiday season.

While routines were developed around each service individually, households also referred to the range of services they use as constitutive of their overall digital lifestyle that they manage in response to changing life circumstances and priorities. For example, when Heather and Michael moved to a new city, they readapted by finding a ride-hailing service and grocery service that operate in the area to rebuild their digital apps portfolio, while having to readjust to Amazon's limited delivery service. Elena reassessed and cancelled Prime and Netflix subscriptions after graduating from university and then again after having a baby, to budget her expenses. Major changes in life circumstances can disrupt households' routine use of on-demand digital services, while the reconfiguration of on-demand digital services can support moments of change (cf. Bissell, 2020; Nash et al, 2020 for similar analysis of life circumstances and food behaviour).

These usage patterns also reflect the intangible and fluid nature of on-demand digital services that make them temporary and yet relatively persistent in the long term, allowing them to come and go as people actively manage and modify the extent of their use in response to life circumstances. The practical work of managing the various digital services helps households find “best-fit” solutions to common situations (e.g., when travelling, when facing high cost of living) to achieve some degree of regularity and stability amidst uncertain circumstances (Jastran et al, 2009). The practical work also reflects the temporary stabilisation of digital consumption routines as digital practices replace, complement, or reconfigure other existing routines (Samsioe and Fuentes, 2022).

During periods of use, households' consumption habits shift in response to the innovations' scripts. For example, as product returns became easier, many households adopted a strategy of ordering multiple versions of the same to return some. Heather and Michael showed two smart

kitchen scales they purchased, citing their intention to compare and return one of them. Alex described his wife ordering multiple clothing items to try on before returning most of them. In response to a minimum spend for free delivery, many households recounted adding to their shopping basket to avoid paying the delivery fee. Sometimes, they ended up throwing the extra items. The ease of purchasing in itself induced additional consumption. These anecdotes highlighted the influence of digital services' scripts designed to facilitate more consumption.

Caroline: "I would often end up buying the stuff that Amazon was delivering trying to make it up to the free delivery threshold because I didn't wanna pay for delivery. I would buy things like a big pack of nuts, but actually I threw them away 'cause they didn't taste very good. When [my partner] got Prime, it just meant that I didn't have to do that and I'd just ask him to get stuff and it would arrive the next day. I got some school uniforms for my daughter, so we got lots of different ones that we tried on... We just sent it back."

Michael: "For the convenience factor, it does allow me to just browse and say, oh, 'I might be interested in trying that' a lot easier and it's more likely that I would do that than going to a physical store."

Another shift is in their time management. Households see the affordance of immediate delivery as a saviour during emergency, allowing them to be more unplanned. Half of the households in the sample recalled using on-demand digital services for something urgent, from late-night food, a ride to a hospital, or an emergency luggage replacement.

Stephanie: "There are phases when I'm just not that organised, that's just a reality. But [food delivery] makes that a little bit easier... I put the kids to bed or, like, put them in the bath and I need something to eat. And then I can just order it there while they're in the bath."

At the same time, households took on practical work to tailor their use of on-demand digital services according to their values, needs, priorities. Often, this was in response to the tension in their cognitive learning around the benefits compared to the social and environmental costs of on-demand digital services. Many households strategically arranged their purchases to bulk-buy orders to reduce shipping and packaging to minimise the environmental impact.

Jessica: "Amazon Prime, we are consciously trying to like group together more of our deliveries. So instead of just buying individual items and getting them next day, we sort of add stuff to the basket every day when we think of it and then just click buy every so often"

Some households with greater mobility options and time tried to avoid using these services to "boycott" the companies, actively choosing to pick up at the restaurant or order in the physical shops. Yet, other households felt they had limited options given their physical, geographical, or financial circumstances. Households cited limitations of not having a car, having mobility issues, or the local shops have closed down as reasons why they needed to continue using on-demand digital services.

Michael: “It's very much a situation where we do not like [Amazon], but sometimes the convenience and the price win out over that. Or the ability to get it at all.”

While households still have a choice of mode of consumption, non-use of digital services may be a lot more effortful, as Sorensen (2006) contended with the normalisation of many technologies. Consumers may be “locked in” by circumstances (Sanne, 2002), rather than completely willing participants in the new consumption model that is increasingly reliant on digitalisation. Households’ perception reflects trends of increased exits of young and small brick-and-mortar stores and decreased new store entries that limits their ability to shop offline (Allen et al, 2018; Chava et al, 2022), which contrasts with the perception of convenience and abundance in on-demand digital services.

Symbolic learning

Throughout the domestication process, households develop meaning around the services that represent their identity through the public presentation of their use of such services. The most dominant one is on-demand as the epitome of convenience. The meaning and value of convenience is shaped by households’ social identity, financial condition, digital capacity and skills, and feelings of social responsibility that coalesce into a complex tapestry of households’ moral economy. Convenience was associated with not having to carry items by households without access to cars, but it also means not having to physically go to the shops or restaurants for households who identified as introverts or with mobility issues. Elena reflected on not being able to shop easily with her baby: “For people who are housebound or who cannot do things, the convenience of [on-demand services] makes their life easier.” Samantha, whose husband has a disability, also appreciated the convenience of getting everything delivered and being able to stay home. The combination of services delivering media, food, grocery, and any other products to the home were seen as allowing people to do everything from home.

For many time-pressed households with intensive work and domestic demands, convenience comes from time-saving and time-management in response to their busyness. Jessica praised the services, “I think it's amazing to have everything at your fingertips... it really improves our quality of life to have all these things and it really comes down to the time-saving.” In this interpretation, on-demand digital services are the latest iteration of the long line of convenient innovation associated with changes in the pace of life that is emblematic of hypermodernity (Tomlinson, 2007; Wajcman, 2008; Rosa, 2013; Urry, 2016). Senior and retired households did not feel the need for speed which they associated with the busy and fast-paced lives of the younger generation. Alex mused, “Time comes relative from me, so I don't need a fast service.” The symbolic meaning that are associated with services can also justify disuse if it misaligns with a household’s identity.

For other households, convenience come from offloading effortful physical tasks to digital tools. This is exemplified by several young households who identified as digitally engaged and saw their use of on-demand digital services as part of their identity. As Michael put it, “I think just because we're such techie people, that's just how we always do things.” To them, digitalisation in itself represented convenience. This symbolic understanding can also validate non-use among households without the digital confidence. Natalie commented, “It's convenience again if you're used to doing it online. For younger people, they do everything

online. I just don't really like it.”

The breadth of affordances households associated with convenience echoes the argument that there is no single definition to the term; rather, convenience is dependent on socio-cultural contexts (Jackson et al, 2018). Convenience of on-demand digital services can come to signify many different things, which may reinforce or challenge the domestication process itself depending on the identity that the households want to project. Households’ use of on-demand digital services exemplifies domestication as a process of active consumption where people engage with the services not just as functional tools but as symbolic objects of values and desires (Silverstone, 2006:232).

Samantha: “Well, if I can't get something tomorrow or for free delivery or free returns, then I'm not going to use it. That's where I am now because it's just kind of become expected... Well, why would I spend on something that's more complicated or get something slower or have to go physically to a place where it could just come to me, or be cheaper or faster? It just feels there is always an easier option.”

Households’ engagement with on-demand digital services as symbolic objects of values is not without moral judgment. On-demand digital services can symbolise a culture of immediate gratification that households disapprove or feel ashamed about even if they still use it. Austin, whose household was a heavy user of on-demand digital services, described themselves as “embarrassingly dependent,” indicating shame as if the high use of digitalisation is socially frowned upon. Some households evaluated on-demand digital services against their moral virtue of patience, financial prudence, and planning ahead. The convenience of digital services is thus morally contested.

Heather: “There's almost something about like, I don't want to go so far as to say morally about waiting, but about, you know, admitting you don't need anything that fast to make somebody else's poor soul, their job to rush this to you.”

More broadly, households conveyed a collective meaning-making around the proliferation of on-demand digital services. Households reflected on the noticeable change from when on-demand digital services were considered an “added nice things to have” to becoming “so much part of our everyday life.” The following quotes represent common sentiments from multiple households:

Susan: “YouTube and [BBC] iPlayer are almost like part of the fabric of society now so it's like I don't see them as anything.”

Austin: “A lot of the stuff, the apps that we have here, are just sort of the fabric of daily life now and not really worthy of note.”

For Austin, the perception of the macro-level role of digital services in society reinforces his own role as a user in the system. He thought of his household as being part of a network that makes the on-demand digital service ecosystem work. It echoes findings from Frid et al. (2024) about the role of using digital platforms as a symbol of social inclusion.

Austin: “I think these are going to be used more and more. A lot of these services, their usefulness is based on some kind of network effect. Like grocery delivery doesn't really make sense if one family is doing it, but the whole neighbourhood is then it makes sense. As they develop more and get used more, I kind of assume they'll just be more and more commonplace.”

Meanwhile, elderly or low-income households with limited digital access or skills talked about not being able to follow the rapid change and participate in the new norm of using digital services for everything, resulting in feelings of digital exclusion. Matthew admitted, “I'm actually looking at getting a phone because otherwise I'm going to get behind with all these apps... that's all it is now, isn't it? Well, I haven't got a clue!”

Conclusion

We have examined how households respond to and engage with on-demand digital services across consumption sectors, from media services to food delivery, ride-hailing and retail. The expansion and normalisation of such business model have engendered expectations of speed, abundance, and convenience from digitalisation that transforms households' consumption habits and societal consumption norms. We analysed this domestication process through the perspective of households' cognitive, practical, and symbolic learning.

Our findings suggest linkages between how households learn about, use, and develop meanings around media and other digital services in the domestication process. The adoption of on-demand media services predates and influences the usage of digital services in retail, food delivery, and ride-hailing. Further, the ease of media services, the horizontal expansion of digital ecosystem across services, and the personalised algorithmic recommendations in the digital space in many cases encourage adoption of other digital services. Through exposure of similar affordances across the consumption sectors, the expectations of convenience, speed, and abundance that were initially prominent in on-demand media services have emerged for retail, food delivery, and mobility. These findings contribute to literature on domestication to highlight the networked characteristic of the domestication process of digital innovations. Learning processes transcend a particular innovation and impact the domestication of other innovations through influencing how households are made aware of certain services, develop skills to use the services, work to fit the services within their routines, and construct meanings around digitalisation's role in everyday life that reinforces the normalisation of digitalisation. (Berker, 2023)

The learning processes also shed light on how the services' scripts intersect with households, shaping the domestication of the services, their usage, and people's consumption patterns. The intangibility and fluidity of these services allow them to be constantly reconfigured as parts of households' overall digital practices, becoming temporary yet persistent throughout household's changing life circumstances. In each use, households are influenced by the intentional design choices of the on-demand digital services such as minimum delivery which impacts their consumption patterns. Simultaneously households do practical work such as bulk buying or actively managing their subscription to 'tame' the services to better fit their priorities.

Lastly, the learning processes shape people's understanding and interpretation of

convenience which frames their domestication of the on-demand services. This is evident in the multiple competing framings of and responses to convenience. Households were still reformulating their understanding of this convenience based on their identity and morality, which may result in increased dependencies or rejection of conveniences as much as possible within their structures. Yet, the interpretive flexibility of convenience allows on-demand digital services to be seen as the “fabric of society” as each household relate to it in their own way while participating in what is perceived to be normal as a way of social inclusion, or conversely, rejecting it due to digital exclusion. We contribute to the literature on convenience a domestication perspective on how learning processes contribute to setting the meaning of convenience in digital space and how it influences households’ use or non-use of digital services.

Recognising the similarities and interdependencies in how households engage with various digital services in media, retail, food, and ride-hailing helps us understand digitalisation as an overarching transformation of consumption. These interconnections matter in shaping broader consumption norms related to digitalisation, normalising digital consumption, and ratcheting up consumption expectations. These dynamics will be crucial in tracing digital consumption’s environmental implications as digital services continue to reconfigure households’ consumption patterns.

Bibliography

- Allen, J., Piecyk, M. and Piotrowska, M. (2018) *An analysis of the same-day delivery market and operations in the UK*, <http://www.ftc2050.com/>.
- Berg, J. and Henriksson, M. (2020) In search of the ‘good life’: Understanding online grocery shopping and everyday mobility as social practices, *Journal of Transport Geography*, 83, doi: doi.org/10.1016/j.jtrangeo.2020.102633.
- Beuscart, J.S., Coavoux, S. and Garrocq, J.B. (2022) Listening to music videos on YouTube. Digital consumption practices and the environmental impact of streaming, *Journal of Consumer Culture*, 2022(0): 1–18, doi: doi.org/10.1177/14695405221133266/FORMAT/EPUB.
- Bissell, D. (2020) Affective platform urbanism: Changing habits of digital on-demand consumption, *Geoforum*, 115: 102–110, doi: doi.org/10.1016/j.geoforum.2020.06.026.
- Blank, G. and Groselj, D. (2014) Dimensions of Internet use: Amount, variety, and types, *Information Communication and Society*, 17(4): 417–435, doi: doi.org/10.1080/1369118X.2014.889189.
- Blumenberg, E., Paul, J. and Pierce, G. (2021) Travel in the digital age: Vehicle ownership and technology-facilitated accessibility, *Transport Policy*, 103: 86–94, doi: doi.org/10.1016/j.tranpol.2021.01.014.
- Brause, S.R. and Blank, G. (2020) *Externalized domestication: smart speaker assistants, networks and domestication theory*, doi: doi.org/10.1080/1369118X.2020.1713845.
- Bravington, A. and King, N. (2019) Putting graphic elicitation into practice: tools and typologies for the use of participant-led diagrams in qualitative research interviews, *Qualitative Research*, 19(5): 506–523, doi: doi.org/10.1177/1468794118781718.
- Van Der Burg, R.J., Ahaus, K., Wortmann, H. and Huitema, G.B. (2019) Investigating the on-demand service characteristics: An empirical study, *Journal of Service Management*, 30(6): 1757–5818, doi: doi.org/10.1108/JOSM-01-2019-0025.
- Chandra, P. and Chen, J. (2019) Taming the Amazon: The domestication of online shopping

- in Bangalore, India. In *ACM International Conference Proceeding Series*. 4 January 2019. Association for Computing Machinery, doi: doi.org/10.1145/3287098.3287105.
- Chava, S., Oettl, A., Singh, M. and Zeng, L. (2022) *Creative Destruction? Impact of E-Commerce on the Retail Sector*. NBER Working Paper Series 30077, <http://www.nber.org/papers/w30077>.
- Cochoy, F., Licoppe, C., McIntyre, M.P. and Sörum, N. (2020) Digitalizing consumer society: equipment and devices of digital consumption, *Journal of Cultural Economy*, 13(1): 1–11, doi: doi.org/10.1080/17530350.2019.1702576.
- Colby, C. and Bell, K. (2016) The On-Demand Economy Is Growing, and Not Just for the Young and Wealthy, *Harvard Business Review*, <https://hbr.org/2016/04/the-on-demand-economy-is-growing-and-not-just-for-the-young-and-wealthy>.
- Coroamă, V.C. and Mattern, F. (2019) Digital rebound – Why digitalization will not redeem us our environmental sins, *CEUR Workshop Proceedings*, 2382.
- Correa, T. (2014) Bottom-Up technology transmission within families: Exploring how youths influence their parents’ digital media use with dyadic data, *Journal of Communication*, 64: 103–124, doi: doi.org/10.1111/jcom.12067.
- Court, V. and Sorrell, S. (2020) Digitalisation of goods: A systematic review of the determinants and magnitude of the impacts on energy consumption, *Environmental Research Letters*, 15(4), doi: doi.org/10.1088/1748-9326/ab6788.
- Dabanc, L., Morganti, E., Arvidsson, N., Woxenius, J., Browne, M. and Saidi, N. (2017) The rise of on-demand ‘Instant Deliveries’ in European cities, *Supply Chain Forum: An International Journal*, 18(4): 203–217, doi: doi.org/10.1080/16258312.2017.1375375.
- Das, S. (2021) The Evolution of Online Retail., in *Fast Fulfillment: The Machine That Changed Retailing*, <http://ebookcentral.proquest.com/lib/oxford/detail.action?docID=6683645>.
- Dijck, J. Van (2021) Seeing the forest for the trees: Visualizing platformization and its governance, *New Media & Society*, 23(9): 2801–2819, doi: doi.org/10.1177/1461444820940293.
- van Dijck, J., Poell, T. and de Waal, M. (2018) *The Platform Society*, Oxford University Press New York, doi: doi.org/10.1093/oso/9780190889760.001.0001.
- Dulrud, A. and Bygstad, B. (2022) Digital ecosystems as social institutions: exploring the role of consumption through four research streams of digital ecosystems, *Consumption and Society*, 1(1): 99–119, doi: doi.org/10.1332/quph6141.
- Dutton, W.H. and Blank, G. (2014) The emergence of next generation internet users, *International Economics and Economics Policy*, 11: 29–47, doi: doi.org/10.1007/s10368-013-0245-8.
- Escursell, S., Llorach-Massana, P. and Roncero, M.B. (2021) Sustainability in e-commerce packaging: A review. *Journal of Cleaner Production*. 280, doi: doi.org/10.1016/j.jclepro.2020.124314.
- Frid, M., Pinheiro-Machado, R., Mayworm Perrut, I. and Pertierra, A.C. (2024) Digital comfort amidst precarity: New middle classes’ experience of well-being and hardship in pandemic times in Brazil, *Journal of Consumer Culture*, 0(0): 1–19, doi: doi.org/10.1177/14695405241243203/FORMAT/EPUB.
- Fuentes, C. and Samsioe, E. (2021) Devising food consumption: complex households and the socio-material work of meal box schemes, *Consumption Markets and Culture*, 24(5): 492–511, doi: doi.org/10.1080/10253866.2020.1810027.
- Groselj, D. (2021) Re-domestication of Internet technologies: Digital exclusion or digital choice?, *Journal of Computer-Mediated Communication*, 26: 422–440, doi: doi.org/10.1093/jcmc/zmab017.
- Hargreaves, T., Wilson, C. and Hauxwell-Baldwin, R. (2018) Learning to live in a smart

- home, *Building Research and Information*, 46(1): 127–139, doi: doi.org/10.1080/09613218.2017.1286882.
- Hertz, F.D. and Halkier, B. (2017) Meal box schemes a convenient way to avoid convenience food? Uses and understandings of meal box schemes among Danish consumers, *Appetite*, 114: 232–239, doi: doi.org/10.1016/j.appet.2017.03.016.
- Jackson, P., Brembeck, H., Everts, J., Fuentes, M., Halkier, B., Daniel Hertz, F., et al (2018) *Reframing Convenience Food*, Palgrave Macmillan.
- Jastran, M.M., Bisogni, C.A., Sobal, J., Blake, C. and Devine, C.M. (2009) Eating routines. Embedded, value based, modifiable, and reflective, *Appetite*, 52(1): 127–136, doi: doi.org/10.1016/j.appet.2008.09.003.
- Jiang, H., Elahi, E., Gao, M., Huang, Y. and Liu, X. (2024) Digital economy to encourage sustainable consumption and reduce carbon emissions, *Journal of Cleaner Production*, 443, doi: doi.org/10.1016/j.jclepro.2024.140867.
- Jiang, L. (Alice), Yang, Z. and Jun, M. (2013) Measuring consumer perceptions of online shopping convenience, *Journal of Service Management*, 24(2): 191–214, doi: doi.org/10.1108/09564231311323962.
- Juntunen, J.K. (2017) Domestication pathways of small-scale renewable energy technologies, *Sustainability: Science, Practice, and Policy*, 10(2): 28–42, doi: doi.org/10.1080/15487733.2014.11908130.
- Juvik, A.K. and Halkier, B. (2023) Pathways to more resource-intensive consumption through convenient bundles and complexes of food, mobility and housing practices, *Consumption and Society*, 3(1): 2–20, doi: doi.org/10.1332/27528499y2023d000000002.
- Kang, P., Song, G., Xu, M., Miller, T.R., Wang, H., Zhang, H., et al (2021) Low-carbon pathways for the booming express delivery sector in China, *Nature Communications*, 12(450): 1–8, doi: doi.org/10.1038/s41467-020-20738-4.
- Klocke, V. (2023) Sitting on the sofa, watching television., in M. Hartmann (ed.) *The Routledge Handbook of Media and Technology Domestication*, Routledge.
- Lange, S., Frick, V., Gossen, M., Pohl, J., Rohde, F. and Santarius, T. (2023) The induction effect: why the rebound effect is only half the story of technology’s failure to achieve sustainability, *Frontiers in Sustainability*, 4, doi: doi.org/10.3389/frsus.2023.1178089.
- Lehner, M., Richter, J.L. and Mont, O. (2023) Digitalization: A potential tool for sustainable consumption?, in *The Future of Consumption: How Technology, Sustainability and Wellbeing will Transform Retail and Customer Experience*, Springer International Publishing, pp 189–204, doi: doi.org/10.1007/978-3-031-33246-3_12.
- Leong, L. (2023) Configuring the “Cuban Internet”: a networked domestication approach., in M. Hartmann (ed.) *The Routledge Handbook of Media and Technology Domestication*, Routledge.
- Lim, T., Lim, B.C., Leong, C., Phang, I.G. and Foong, W.H. (2023) Consumer adoption of on-demand digital platforms: An integrated model, *Global Business and Organizational Excellence*, doi: doi.org/10.1002/JOE.22210.
- Lord, C., Bates, O., Friday, A., McLeod, F., Cherrett, T., Martinez-Sykora, A., et al (2023) The sustainability of the gig economy food delivery system (Deliveroo, UberEATS and Just-Eat): Histories and futures of rebound, lock-in and path dependency, *International Journal of Sustainable Transportation*, 17(5): 490–502, doi: doi.org/10.1080/15568318.2022.2066583.
- Meese, J. (2017) The domestic ecology of Australian subscription video on demand services, *Media International Australia*, 164(1): 21–31, doi: doi.org/10.1177/1329878X17694961/FORMAT/EPUB.
- Munoz-Villamizar, A., Velazquez-Martinez, J.C., Haro, P., Ferrer, A. and Marino, R. (2021) The environmental impact of fast shipping ecommerce in inbound logistics operations: A

- case study in Mexico, *Journal of Cleaner Production*, 283, doi: doi.org/10.1016/j.jclepro.2020.125400.
- Nash, N., Whittle, C. and Whitmarsh, L. (2020) *Rapid Review of “Moments of Change” & Food-Related Behaviours*.
- Newing, A., Hood, N., Videira, F. and Lewis, J. (2022) ‘Sorry we do not deliver to your area’: geographical inequalities in online groceries provision, *The International Review of Retail, Distribution and Consumer Research*, 32(1): 80–99, doi: doi.org/10.1080/09593969.2021.2017321.
- Office for National Statistics (2025) *Internet sales as a percentage of total retail sales (ratio) (%)*, Retail Sales Index Time Series, <https://www.ons.gov.uk/businessindustryandtrade/retailindustry/timeseries/j4mc/drsi>.
- Parrish, B. (2025) *Conceptualising Processes of User Learning in Domestication Theory: What, why, and how?*
- Ritzer, G. and Miles, S. (2019) The changing nature of consumption and the intensification of McDonaldization in the digital age, *Journal of Consumer Culture*, 19(1): 3–20, doi: doi.org/10.1177/1469540518818628/FORMAT/EPUB.
- Roberts, P. (2015) *The Impulse Society: What’s Wrong with Getting what We Want?*, Bloomsbury.
- Roichman, R., Sprecher, B., Blass, V., Meshulam, T. and Makov, T. (2024) The convenience economy: Product flows and GHG emissions of returned apparel in the EU, *Resources, Conservation and Recycling*, 210, doi: doi.org/10.1016/j.resconrec.2024.107811.
- Samsioe, E. and Fuentes, C. (2022) Digitalizing shopping routines: Re-organizing household practices to enable sustainable food provisioning, *Sustainable Production and Consumption*, 29: 807–819, doi: doi.org/10.1016/j.spc.2021.07.019.
- Samson, C. (2024) Understanding interrelated practices and their climate-related consequences: exploring food, mobility and housing in everyday life, *Consumption and Society*, 3(2): 148–165, doi: doi.org/10.1332/27528499y2024d000000010.
- Sanne, C. (2002) Willing consumers-or locked-in? Policies for a sustainable consumption, *Ecological Economics*, 42: 273–287.
- Shove, E. (2003) Converging Conventions of Comfort, Cleanliness and Convenience, *Journal of Consumer Policy*, 26: 395–418.
- Siles, I., Espinoza-Rojas, J., Naranjo, A. and Tristán, M.F. (2019) The Mutual Domestication of Users and Algorithmic Recommendations on Netflix, *Communication, Culture and Critique*, doi: doi.org/10.1093/ccc/tcz025.
- Silverstone, R. (2006) Domesticating domestication: Reflections on the life of a concept., in T. Berker, M. Hartmann, Y. Punie and K.J. Ward (eds) *Domestication of Media and Technology*, Open University Press, pp 229–248.
- Silverstone, R., Hirsch, E. and Morley, D. (1992) Information and communication technologies and the moral economy of the household., in E. Hirsch and R. Silverstone (eds) *Consuming Technologies: Media and Information in Domestic Spaces*, Taylor & Francis Group, pp 13–28, <http://ebookcentral.proquest.com/lib/oxford/detail.action?docID=179538>.
- Sinkovics, R.R. and Alfoldi, E.A. (2012) Progressive Focusing and Trustworthiness in Qualitative Research: The Enabling Role of Computer-Assisted Qualitative Data Analysis Software (CAQDAS), *Management International Review*, 52(6): 817–845, doi: doi.org/10.1007/s11575-012-0140-5.
- Smith, A. (2016) *Shared, Collaborative and On Demand: The New Digital Economy*, www.pewresearch.org.
- Søraa, R.A., Nyvoll, P., Tøndel, G., Fosch-Villaronga, E. and Serrano, J.A. (2021) The social dimension of domesticating technology: Interactions between older adults, caregivers,

- and robots in the home, *Technological Forecasting and Social Change*, 167: 120678, doi: doi.org/10.1016/J.TECHFORE.2021.120678.
- Sørensen, K.H. (1996) *Learning technology, constructing culture. Sociotechnical change as social learning*. STS Working Paper 18/96, doi: doi.org/10.13140/RG.2.2.30403.71206.
- Sørensen, K.H. (2006) Domestication: the enactment of technology., in T. Berker, M. Hartmann, Y. Punie and K.J. Ward (eds) *Domestication of Media and Technology*, Open University Press, pp 40–57.
- Srnicek, N. (2017) Platform Capitalism., in *Platform Capitalism*, Polity, <https://www.ebsco.com/terms-of-use>.
- Stehrenberger, A., Danesi, G. and Schneider, T. (2024) More of the same? How digital food platforms reinforce prevailing eating interests and practices, *Journal of Cultural Economy*, doi: doi.org/10.1080/17530350.2024.2378472.
- Strengers, Y. and Nicholls, L. (2017) Convenience and energy consumption in the smart home of the future: Industry visions from Australia and beyond, *Energy Research and Social Science*, 32: 86–93, doi: doi.org/10.1016/j.erss.2017.02.008.
- Taylor, T.A. (2018) On-Demand Service Platforms, *Manufacturing & Service Operations Management*, 20(4): 704–720, doi: doi.org/10.1287/msom.2017.0678.
- Tirachini, A. (2020) Ride-hailing, travel behaviour and sustainable mobility: An international review, *Transportation*, 47: 2011–2047, doi: doi.org/10.1007/s11116-019-10070-2.
- Tomlinson, J. (2007) *The Culture of Speed: The Coming of Immediacy*, SAGE Publications, <http://tcs.ntu.ac.uk>.
- Tyron, C. (2013) *On-Demand Culture: Digital Delivery and the Future of Movies*, Rutgers University Press.
- Ward, K. (2006) The bald guy just ate an orange. Domestication, work and home., in T. Berker, M. Hartmann, Y. Punie and K.J. Ward (eds) *Domestication of Media and Technology*, Open University Press, pp 145–163.
- Warde, A. (1999) Convenience Food: Space and Timing, *British Food Journal*, 101(7): 518–527, doi: doi.org/https://doi.org/10.1108/00070709910279018.
- Widdicks, K., Hazas, M., Bates, O. and Friday, A. (2019) Streaming, Multi-Screens and YouTube: The New (Unsustainable) Ways of Watching in the Home. In *CHI Conference on Human Factors in Computing Systems Proceedings*. Glasgow, Scotland, May 2019, doi: doi.org/10.1145/3290605.3300696.
- Xie, J., Xu, Y. and Li, H. (2021) Environmental impact of express food delivery in China: The role of personal consumption choice, *Environment, Development and Sustainability*, 23(6): 8234–8251, doi: doi.org/10.1007/s10668-020-00961-1.