Artificial Intelligence and Human Perception

Media Discourse and Public Opinion

Edited by
Emma Lupano, Paolo Orrù

FrancoAngeli

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Smartness as a New Paradigm for Retail? Sociotechnical Imaginaries of Autonomous Stores in the Media

by Ana Viseu, João Pedro Pereira & Ana Delicado

1. Introduction

While there is no widely accepted definition of "autonomous stores" (AS), they are typically described as AI-powered physical spaces that monitor customer interactions, automatically bill for items, and allow customers to simply pick up goods and leave without the traditional checkout (Phillips *et al*., 2022). Media often describe autonomous stores as the «store of the future» (*NYT*, 2018, news article) and the «future of shopping» (*The Guardian*, 2016, news article), demonstrating how technology can enhance everyday life (*PT specialized media*, 2023, news article). These stores are expected to disrupt retail and consumption, conflating imaginaries of technological progress in the service of consumer convenience and automation.

This chapter aims to probe the «sociotechnical imaginaries» (Jasanoff & Kim, 2009; Jasanoff, 2015) of autonomous stores that circulate in news media. Defined by Jasanoff as «collectively held, institutionally stabilized, and publicly performed visions of desirable futures, animated by shared understandings of forms of social life and social order attainable through, and supportive of, advances in science and technology» (2015: 4), sociotechnical imaginaries highlight the performative role of discourse and imagination in bringing entities and worlds into existence.

We examine how autonomous stores are defined, the purported needs that drive them, the users they conjure, and their broader implications. Our analysis is based on 137 media articles written about AS published across selected legacy and specialized outlets between 2016 and 2023 in Portugal, the United Kingdom, and the United States, which were thematically analysed using MaxQDA software (Braun & Clarke, 2006). The chapter stems from an ongoing research project funded by the

Portuguese Foundation for Science and Technology, *Autonomous Stores*: *Sociotechnical Infrastructures, Imaginaries and Data Governance*, that seeks to examine how autonomous stores are materially and discursively constituted, maintained, and used.

2. Theoretical framework

Sociotechnical imaginaries provide a generative framework for analysing technological and scientific innovation by highlighting how discourse and imagination shape reality. They act as «infrastructures of imagining and planning» (Sismondo, 2020: 505), blurring the line between real and imagined worlds and creating authoritative visions of how the world works – and should work" (Jasanoff, 2015: 6). They are also «typically contested, changeable, flexible and loose around the edges» (Sismondo, 2020: 505). Albeit relying mainly on discourses and narratives, sociotechnical imaginaries help co-produce the futures they envision by, among others, «soliciting public, political and even financial support» (Sovacool *et al*., 2020: 643).

Several authors have argued for the importance of studying the role of media in creating sociotechnical imaginaries, outlining different reasonings. Media play a crucial role in creating sociotechnical imaginaries by framing public understanding (Sartori & Bocca, 2023: 445), influencing policymakers and consumers, and enabling the rapid global spread of these imaginaries (Vicente & Dias-Trindade, 2021). However, the representations presented in the media are too often translations of narratives created by other actors who have their interests in mind, and who are cited, interviewed, or given space in opinion columns (Delicado, Viseu, & Mourão, in press). On this matter, Mager and Katzenbach (2021: 223) argue that large technological companies play increasingly big roles in the «imaginative power of shaping future society» subsuming the role of public entities.

In this chapter, we examine how the (still) unstable entity of "autonomous store" is being created in the media. To do so, we address two complementary questions: What visions, fantasies, problems, and fears about AS circulate in the national and international media? What discursive strategies are used to drive, justify, and normalize the materialization of these imaginaries? In the limited scientific literature these digital assemblages are sometimes also referred to as examples of cutting-edge «cyber-physical-human» (Liu, 2018: 336) or «AI-physical-human» (van Esch, Cui & Jain, 2021a) systems that offer «convenience,

choice and savings» (Liu, 2018: 337). Without fully specifying who the recipient of these benefits is, the literature on AS seems to equate consumers, retailers (and workers) as having equal goals and power. Moreover, this transformation is understood to be simultaneously revolutionary – with «unique and unprecedented implications» (van Esch *et al.*, 2021a: 1082), and merely a product of technological innovation whose goal is to save time.

Autonomous stores are driven by the promise of convenience, envisioning a «frictionless consumer shopping journey» (van Esch *et al.*, 2021b: 67) where technology minimizes human involvement in checkout processes, "liberating consumers' hands" from manual tasks (van Esch, Cui & Jain, 2021a: 1081). In these "frictionless" spaces, time-pressed users are "liberated", trading their data for faster checkout experiences. Yet, other rationales linger as some studies suggest that reducing friction «typically increases customer spending» (Phillips *et al.*, 2022: 2). Moreover, and unapologetically, «the goal of such innovative checkouts is to replace the role of frontline retail staff» (Froehle & Roth, 2004: 1084; cited in van Esch *et al.,* 2021a), that is, the goal is to reduce the number of staff.

Autonomous stores are made possible by different instantiations of what Amazon, the global tech giant, named *Just Walk Out* technology. Stating that it developed the *Just Walk Out* technology before «generative AI became a buzzword», Amazon described it in 2023 as «a combination of computer vision and machine learning [that] allows the system to know "who takes what and charge them correctly when they walk out"» (Amazon staff, 2023). Describing it as so «accurate that it can track groups of shoppers», Amazon adds that «it feels like magic» and will «revolutionize the shopping experience» (Amazon staff, 2023). On this subject, Atanasoski and Vora (2019: 6) argue that «in the desire for enchanted technologies that intuit human needs and serve human desires, labour becomes something that is intentionally obfuscated to create the effect of machine autonomy». Here the individual, neoliberal subject, is fully entwined with capitalist dreams and turned into autonomous consumer. This is all the more noteworthy as recent media reports leaked in 2024 indicate that Amazon's technology was powered by 1000 Indian outsourced workers who reviewed and annotated every interaction that took place in the store (Tangermann, 2024; Bitter, 2024), thus being a prime example of «AI impersonation» (Le Ludec, Cornet & Casilli, 2023).

Autonomy, within the framework of a store, requires some ontological redefinitions. For instance, within autonomous stores-as-systems, humans (workers and shoppers) remain hurdles (or factors) to be overcome. Their movements and actions add complexity and introduce friction in the

system, they (may) attempt to explore vulnerabilities and trick the system (shoplifting), but also, and more essentially, their bodies obstruct signals. Human bodies, Liu (2018: 345) reminds us, «are terrible media for most sensing signals, such as RF, sound, and light». Keeping «the human in the loop» (Edwards, 1996) means creating systems that tolerate uncertainty and can resolve it «opportunistically or intentionally later» (Liu, 2018: 345).

The ontology of the physical space is also transformed. Autonomy is achieved through positing a space that is «aware of all elements involved – products, people, and activities – without explicit help from human workers» (Liu, 2018: 336). The dream of "awareness" as a harbinger of intelligence has a long history in technological innovation (Viseu & Suchman, 2010) and here it returns in the service of consumption to «revolutioniz[e] the consumer shopping experience and […] set new expectations of what shopping can or should be in the future» (Grewal *et al.*, 2017: 2). In other words, AS are revolutionary for consumers but also, and pointedly, they are also new opportunities for retailers to sell, monitor, market and extract data (van Esch *et al.*, 2021b).

To operate correctly, AS depend on constant surveillance and monitoring raising both security and ethical questions. The European Data Protection Supervisor (Enescu, 2024) mentions four possible negative impacts of autonomous stores in the area of data protection: uncritical acceptance of surveillance practices as the new norm; the possibility of abusive practices related to profiling (such as aggressive campaigns of targeted advertising); opacity regarding the use of data; and, lack of safeguards for vulnerable segments of the population (children, for example)[1]. While customers may view profiling positively due to personalized recommendations and promotions, the personalization-privacy paradox remains a significant concern (Grewal *et al.*, 2017: 2).

Besides questions of data protection and privacy, the literature on AS also presents possible negative impacts when it comes to social relations. Ponte and Bonazzi (2023: 1186) argue that the reduction in social interactions arising from the elimination of checkouts is a concern. Conversations with cashiers can, for instance, be one of the few interactions that elderly people have throughout the day, showing the job's utility reaches beyond the economic sphere.

The literature on autonomous stores is limited, generally optimistic, and somewhat deterministic. In this chapter, we examine how the media circulate and create public perceptions of AS and their societal roles.

1. See Menosky (2017) for an analysis of USA context.

3. Methodology

This study examines media portrayals of autonomous stores across select outlets from three countries (2016-2023), focusing on emerging visions and what drives their materialization. Our choice of outlets aimed to capture both retail-focused and widely read venues shaping global imaginaries. We used 7 keywords (in Portuguese and English) to guide our searches: autonomous store, smart shop, smart store, cashier-less supermarket, *Amazon Go*, *Continente Labs*, and *SENSEI* autonomous store (the latter two pointing towards the Portuguese context).

Data generation comprised two phases: First, we conducted an exhaustive media search in Portugal, where start-up Sensei Tech often garners media attention. To do so, we used a media monitoring tool (CISION) and followed it up with manual searches using Google. This yielded a total of 59 articles. Second, we conducted manual searches in three international, global outlets: *The New York Times* (USA), *Wired Magazine* (USA), and *The Guardian* (UK). All three venues have broad and wide readerships and are thus important actors in shaping sociotechnical imaginaries. These searches help us identify 78 articles, to a final corpus of 137 media articles (see Table 1). It is important to note that while media analysis helps reveal key actors and tropes, limitations include the shrinking influence of legacy print media, which may only shape opinions among elites. Additionally, the narratives presented here are limited and do not allow for geographical comparisons. Despite these challenges, this analysis explores a broad spectrum of imaginaries shaping future shopping through autonomous stores.

Table 1 - Final sample of articles published between 2016-2023 (N= 137)

Media outlets	*Frequency (percentage)*
Portuguese mainstream and specialized outlets	59 (43)
The Guardian (generalist, UK)	32 (23.3)
The New York Times (generalist, USA)	28 (20.4)
Wired Magazine (specialized, USA)	18 (13.1) including two sponsored articles
Total	137 (100)

All articles were coded by at least two team members using MAXQDA. While incorporating insights from the literature review, we

primarily relied on thematic analysis (Braun & Clarke, 2006), a method suited to media analysis for its ability to both reflect and unravel reality. This process identified 34 initial codes, which were then grouped into themes. For this article, we focused on codes linked to the main theme of "future rhetoric and visions".

4. Analysis

This section presents the findings of our thematic analysis. First, we explore how autonomous stores (AS) are defined and portrayed in the media, and who is shaping these definitions. Next, we examine the users and motives that different actors leverage to promote this retail model. We then examine the perceived impacts of AS. Lastly, we address the anticipated hurdles and concerns surrounding their adoption.

a) What is an autonomous store?

Like the scientific literature, the media lacks a single, agreed-upon definition of autonomous stores. However, certain features consistently recur. A notable definition comes from Vasco Portugal, CEO of Sensei, a Portuguese start-up aiming to be a major player in the field. He states,

> our mission is to create **smart stores** that **intuitively** understand customers' needs and help retailers provide them with a more **convenient**, **frictionless** and **personalized** experience and service than has been possible to date (*PT specialized media*, 2018, news article, our underline).

The mention of intelligence aided by *intuition* is not coincidental. Since at least the late 1990s computer scientists and technology developers have emphasized the need to create intelligent machines that understand and «enhance our own humanity» (Picard, 1997: xi). Thus, like other technological artifacts before them, AS work off a particular notion of autonomy that relies on the invisibility of the infrastructures and labour – human, technical, knowledge, etc. – that power them (Suchman, 2007; Strathern, 1996). Autonomous stores also materialize dreams of convenience or personalization which many authors have argued is aligned with capitalist logics of consumption (Dahlgren *et al*., 2021; Shove, 2003).

Representations of AS tend to be accompanied by descriptions of their "cutting-edge" and "state of the art" character and revolutionary

implications. Often, this will include a list of technologies and analogies to autonomous or self-driving cars:

> Our checkout-free shopping experience is made possible by the same types of technologies used in self-driving cars: computer vision, sensor fusion, and deep learning (*The Guardian*, 2016, news article).

> the services offered by [Portugal's] new startup star promise to revolutionize the way we shop (*PT specialized media*, 2021, interview).

> It's at the cutting edge of AI and machine learning (*The Guardian*, 2018, news article).

Together, these depictions serve to reinforce the futuristic narratives that are constructed about autonomous stores, linking them to imaginaries of innovation and technological progress. We also start to see connections drawn between Sensei, the *star* startup, and Portugal's national innovation context. These are present throughout the analysis.

By and large, in the media we find autonomous stores defined by their underlying technology and the company that produces it: *Just Walk Out* store (*The Guardian*, 2021, news article), and *Amazon Go* (*The Guardian*, 2016, news article. Other designations of autonomous stores that frequently accompany these two labels, can be more descriptive «checkout free store» (*The Guardian*, 2021, news article) or «cashierless store» (*NYT*, 2019, news article), or more visionary, «automated shop» (*The Guardian*, 2020, news article), «store of the future» (*NYT*, 2018, news article; *PT generalist media* 2021, news article), «smart store» (*The Guardian*, 2017, news article). Interestingly, the label «autonomous store» only appears in Portuguese media (*PT specialized media*, 2023, news article). This seems to be because Portuguese media dedicate significant space to covering (and replicating) the Sensei's discourse.

Our analysis reveals that Amazon is the primary actor driving the definition and development of autonomous stores. Examining media representations of these stores is, in effect, a study of Amazon's influence. This entanglement began in 2016 when Amazon introduced its *Amazon Go* stores. Although still in a testing phase, media coverage described them as «real-world shops where customers walk in, take what they want, and walk out» (*The Guardian*, 2016, news article). From then on, Amazon was credited with pioneering both autonomous stores and the supporting *Just Walk Out* technology. Consequently, in the media, *Amazon Go* became synonymous with autonomous stores, presented as its archetype. By 2018, when *Amazon Go* stores officially opened (with a one-year delay), the

media framed Amazon's involvement as both ensuring their success and as making their widespread adoption seem inevitable. The following quotes exemplify this:

> Amazon and Walmart together are among the top retailers in the world. Assuming each finds success (translation: profits) from this new form of automated and self-service approach to shopkeeping, it won't be long before the trend sweeps across the entire industry (*The Guardian*, 2018, news article).

> With its profound knowledge of its customers, Amazon can move into almost any sector – striking fear into the hearts of rivals. And the $740bn company is "just getting started" (*The Guardian*, 2018, news article).

b) Conjuring needs and their users

As they define AS, reports in the media simultaneously describe the purported need for them. The main problem (or selling point) that autonomous stores aim to address is time spent in checkout queues. Most articles describe a society where *frustrated* customers waste time waiting to pay, negatively impacting their shopping experience:

> Just Walk Out addresses consumers' frustration with waiting in checkout lines, so they can quickly get their items and move on with the rest of their day. That's the power of what machine learning can do to create magical experiences for consumers (*Wired*, n.d., sponsored article).

> A global race to automate stores is underway among several of the world's top retailers and small tech start-ups motivated to […] minimize shopper's frustrations, like waiting for cashiers (*The New York Times*, 2018, news article).

The "frustration" trope is recurrent and autonomous stores are presented as the solution, eliminating checkouts – seen as points of "friction" – enhancing speed and creating more enjoyable, even "magical", shopping experiences. Additionally, the media help create the figure of the "global race" toward autonomous stores suggesting (again) a sense of inevitability, with Amazon implicitly portrayed as its driving force.

In defining the need for autonomous stores, media reports also conjure their users. These are sometimes seen as the customers, other times as the retailers, often conflating the two and suggesting that their needs and benefits align. The media portrays autonomous stores as solutions for busy, urban, tech-savvy, young consumers, even likening them to "authentic ninjas" who can effortlessly enter and exit without detection.

Tech-savvy and time-pressed customers have flocked to such services (*NYT*, 2019, news article).

would appeal to time-pressed shoppers looking for a fast, "frictionless" buying experience where they did not have to queue at the till (*The Guardian*, 2018, news article).

smart, autonomous supermarkets, where there are no cashiers to keep track of the products we're carrying, which makes customers authentic "ninjas", who come and go almost unnoticed – at least by flesh and blood people (*PT specialized media*, 2023, news article).

For Vasco Portugal [Sensei's CEO], […] "Making the shopping experience as simple as going to the pantry or fridge" is an expectation in line with a new generation, used to ordering an Uber and paying via an app (*PT specialized media*, 2023, news article).

The analogy of "autonomous stores as a pantry", widely replicated in Portuguese media, helps domesticate the concept, making it feel familiar and routine. Similarly, the "ninja" metaphor reframes the unease some journalists report – feeling as if they are stealing rather than buying – by turning it into a playful, popular culture reference.

c) Perceived impacts of AS

The primary impact highlighted in the media relates to automation's effect on the job market, and occasionally, the broader economy. While there is no consensus on the specifics, two dominant perspectives emerge. The first, most prominent, and "pessimistic" view focuses on job losses, particularly among cashiers, increased unemployment, and growing income inequality due to automation. This narrative builds on widespread critiques of automation and artificial intelligence, often reinforcing the notion that technological transformation is inevitable:

Robots will take our jobs. We'd better plan now, before it's too late (*The Guardian*, 2018, opinion piece).

There are a little over 3.5 million cashiers in the United States in 2016 – and some of their jobs may be in jeopardy if the technology behind Amazon Go eventually spreads (*NYT*, 2018, news article).

And really, it is just the next logical development from the automated checkouts already in use in most supermarkets […]. So by any measure, it's hard to see how an operation like Amazon Go doesn't ultimately mean fewer jobs (*The Guardian*, 2016, news article).

The second, more "optimistic" perspective, frames automation as an opportunity, emphasizing the potential for workers to transition to other roles and eliminating the most exhausting, low-paying jobs. While this view is less common in international media, it is more prominent in Portuguese outlets, where coverage often includes interviews with Sensei's leadership, highlighting the positive aspects of workforce transformation.

> Sensei says it doesn't want to create stores without employees. "The issue of technology causing the end of some jobs is a cross-cutting issue in many areas", says Vasco Portugal. "What we want to do is replace mechanically demanding work that nobody likes doing" (*PT generalist media*, 2019, news article).

> In [the CEO's] experience, in the stores where the system has been installed, there is a combination of [workers] more focused on the end customer, explaining how the system works, rather than mechanical work, "we are humanizing the work of the person in the store and not the other way around" (*PT generalist media*, 2023, news article).

> Robots will take on the more repetitive tasks, freeing up staff to offer more expert and personalised advice (*The Guardian*, 2017, analysis piece).

Together these positive and negative narratives have several interesting characteristics: AS are presented as both disruptive (and contributing to large increases in unemployment) and just "the next logical development" in innovation. Moreover, they come enveloped in a discourse of the inevitability of technological transformation, suggesting "we better plan now".

Importantly, we find few mentions of the racialized and gendered character of the jobs that will be automated. Instead, as seen above, these technologies are deemed to free up and humanize retail workers. Atanasoski and Vora have criticized these discourses as a form of "technoliberalism" where (technological) futures are deeply tied to capitalist development and «iterate a fantasy that as machines, algorithms, and artificial intelligence take over the dull, dirty, repetitive, and even reproductive labour performed by racialized, gendered, and colonized workers in the past, the full humanity of the (already) human subject will be freed for creative capacities» (2019: 4).

Another key impact of autonomous stores, often discussed in the media, involves the transformation of physical retail spaces through the concept of "phygital" – combining physical stores with e-commerce features. This term, particularly common in Portuguese specialized media, is seen as the future and a major advantage for retailers. Autonomous stores are portrayed as digital infrastructures that gather data on consumer

behaviour, offering insights for improved store management (e.g., stock monitoring) and deeper knowledge of consumer preferences. This data enables targeted marketing, such as personalized product recommendations based on purchase history, and supports regional innovation and progress.

> The accounting is easier. More data can be gathered to track sales, understand buying habits and potentially market to costumers (*The Guardian*, 2018, news article).

> Amazon isn't abandoning online retail for brick-and-mortar. Rather, it's planning to fuse the two. It's going to digitize our daily lives in ways that make surge-pricing your groceries look primitive by comparison. It's going to expand Silicon Valley's surveillance-based business model into physical space and make money from monitoring everything we do (*The Guardian*, 2017, news article).

> Unlike the online world, in physical stores – which account for around 90% of global sales – the difficulty in observing and knowing real and effective consumer behavior costs retailers thousands of euros (*PT specialized media*, 2018, news article).

The stated opportunities for retailers to adopt this new store format don't end here. Because AS track all movements that occur within them, they seem to offer the possibility of putting an end to shoplifting – a problem that is repeatedly described in the media as important, with one outlet writing that, in the UK, «some […] £5.5bn (are) lost every year to shoplifting and employee theft» (*The Guardian*, 2022, news article). However, this solution is depicted in the media as a potentially problematic double-edged sword:

> Constant surveillance means there's no shoplifting, but it has a whiff of Big Brother about it (*The Guardian*, 2018, opinion piece).

> Going to the supermarket is one of the most mundane, everyday things we do. The fact that surveillance and data gathering in such a space is being normalised is deeply troubling (*The Guardian*, 2022, news article).

> No wonder retailers are doing backflips to make shopping as convenient, pleasurable – and quietly invasive – as possible (*Wired*, 2018, news article).

The merger of online and offline environments in autonomous stores allows retailers to enhance data collection practices associated with *Surveillance Capitalism* (Zuboff, 2019). While media often discuss the privacy concerns for consumers and citizens, they tend to overlook the implications after data is collected. Tech companies reassure the public

that these stores do not track identities or use facial recognition. However, they don't address how collected data can be individualized by combining it with existing technologies, such as loyalty cards.

d) Hurdles and concerns

While the media envisions widespread adoption, it acknowledges potential resistance or scepticism from customers regarding surveillance practices in autonomous stores. Though this resistance is seen as temporary, subsumed by Amazon's influence to make the future inevitable, it remains an obstacle retailers must address to ensure the viability of autonomous stores. The following segment exemplifies this point:

> Amazon is likely to face some resistance as it colonizes more of our lives. People may not love the idea of their supermarkets spying on them, or every square inch of their homes being fed to an algorithm. But one should never underestimate how rapidly norms can be readjusted when capital requires it (*The Guardian*, 2017, news article).

Likewise, despite the references to "state of the art technology", the systems behind autonomous stores are still under development, with some retailers testing in 'lab stores' (as seen in Portugal). Yet, while media reports occasionally acknowledge potential issues with technology maturity, such as incorrect data extraction or inaccurate shopping baskets, these problems are rarely questioned or discussed in detail. Instead, in a strategy frequently used in visions of technoscientific innovation, the visions are moved forward thus making them unaccountable to the present (Suchman, 2007; Lauren-Hoffman, 2022). The following excerpt is exemplary:

> More important still is the fact that the system is gradually learning with this human feedback, and diminishes the probability of having that same problem in the future (*PT specialized media* 2021, interview).

Finally, while largely marked by *techno-optimism* or the belief that «technology […] is the key to unlocking a better world» (Danaher, 2022: 54), media reports also describe autonomous stores as potentially discriminatory, excluding certain groups from «the great supermarket melting pot» (*The Guardian*, 2022, news article).

These groups are also described as those who most rely on cashier interactions for daily social contact (*The Guardian*, 2016, editorial), also

pointing to the utility of cashiers as beyond the economic sphere. It is worth pointing out that these fears are mostly discussed in opinion pieces rather than news articles, for instance,

> The store is only open to shoppers who can download an app on their smartphone, which rules out those who rely on welfare food stamps (*The Guardian*, 2018, opinion piece).

> The Amazon store experience, while presented as frictionless, contains a lot of friction – so much so that many people are excluded from entry. On top of the complex surveillance system, every customer needs to have a smartphone, have downloaded the Amazon app, logged in to an Amazon account, and connected to a means of payment. When an Amazon Fresh store opened in West London in March 2021, a journalist observed an old man trying to go in to pick up some groceries, but he gave up when he was told all the steps he would have to take just to enter (*Wired*, 2022, opinion piece).

5. Conclusion

Our analysis of the media discourses of autonomous stores identifies them as being framed by narratives of inevitable technological progress, that mix techno-optimism with (more limited) concerns about societal impacts. Confirming arguments by Mager and Katzenbach (2021) we found that tech companies (namely, Amazon and Sensei) are key drivers of these futures. We found that many of the discourses align with visions of techno-optimism and solutionism (Morozov, 2013) that feature autonomous stores as the answer to social problems (real or imagined). Conjuring visions of the frustrated, busy, and urban consumer who desire a "frictionless shopping experience". Questions of surveillance, exclusion of certain groups, and technology development are a part of the sociotechnical imaginaries featured in the media. It is mostly in the retail-specialized venues that we find glimpses of the benefits to the other users: retailers.

Here, what is highlighted is automation (and thus possible associated cuts with labour) as well the possibilities for transforming brick-and-mortar shops into e-commerce sites where data is seamlessly extracted and then used to drive consumer behaviour and sales. We observed that Portuguese media – because of the many specialized sources – often link the future of AS with narratives of national progress and innovation.

Finally, we would like to say a few words about what is not discussed in the media. We found that not enough attention is paid to the gendered

and racialized nature of jobs being automated. Moreover, more discussion of the meanings of *automation* and *autonomy* is needed since current discourses continue to make invisible the human work that sustains "the magic" of autonomous infrastructures.

The current debacle of *Amazon Go*'s army of Indian outsourced workers who annotated video interactions is exemplary. We need continued debates over the discriminatory futures we are building and the power relations that are inscribed in them. And, last but not least, we need autonomous store tech developers to provide much more details on data usage beyond the collection point.

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Artificial Intelligence and Human Perception

Artificial intelligence is emerging as a key global issue of our time, due to its disruptive potential and pervasiveness. This interdisciplinary volume addresses AI's implications for human development and discourse, drawing on diverse disciplines ranging from anthropology to linguistics, sociology, and political science. By examining both the production and reception of AI discourse, this collection, which features studies across four continents, investigates how AI narratives are constructed in different cultural contexts and how they influence public opinion. Different methodologies are used to explore AI's media representations, political implications, and impact on various industries. Looking at both leading global actors such as the US, the EU and China, which are driving AI advancements, and countries and regions that are more deeply affected by AI's massive adoption, this collection contributes to de-westernising communication research by deepening our understanding of the challenges and opportunities posed by AI at global level as well as in different geographical contexts.

Emma Lupano teaches Chinese language and culture at the University of Cagliari. Her research focuses on the relationship between culture, politics, and their linguistic manifestations in contemporary China. She wrote several essays on Chinese institutional and media discourse, and authored two books about Chinese journalism. Previously, she worked at the University of Milan, Peking University, and the University of Hong Kong's China Media Project.

Paolo Orrù teaches Italian linguistics at the University of Cagliari. His main research interests are discourse analysis, corpus linguistics, the language of politics and teaching Italian as a second language. He is the author of several essays on the issue of linguistic discrimination in its various forms and in different media, including the monograph *Il discorso sulle migrazioni nell'Italia contemporanea* (FrancoAngeli, 2017).

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