

# Consumer profile

How companies are creating a clear and real psychological profile of each consumer in order to deliver hyper-personalised advertisements of what can really be sold to us



**IDHUS**  
Institute for the Development  
of Human Societies

Dossier #5




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# Dossier

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In January of last year, the Consumer Intelligence Research Partners (CIRP) conducted an estimation which indicated that Amazon's Echo/Alexa held a dominant market share of approximately 70% within the smart speaker sector of the United States. The remaining portion of this market was primarily under the control of Google Home, with Apple's HomePod commanding only a relatively modest share. This industry constitutes a substantial economic domain, generating multimillion-dollar revenues annually, and exhibiting a continuous trajectory of growth.

The commonplace utterance, "*Alexa, what is the schedule for the next train to Chicago?*" exemplifies the burgeoning prevalence of such inquiries within myriad households worldwide, particularly within the United States where smart speaker adoption has reached a multi-million unit threshold. Nevertheless, for a segment of the population, the prospect of having an at-home device capable of furnishing information, traffic updates, or sports scores remains a matter met with skepticism. This apprehension revolves around the conjecture that artificial intelligence entities like Alexa, akin to their counterparts from other brands, may potentially impede residential activities by inadvertently triggering actions such as locking garage doors or tempering with the hot water supply in response to perceived grievances. This skepticism highlights the tension between the fictionalized portrayal of these systems within the collective psyche and their actual utility. Furthermore, it underscores the pervasive reservations stemming from apprehensions about mass data surveillance and infringement upon personal privacy by conglomerates such as Amazon or Google.

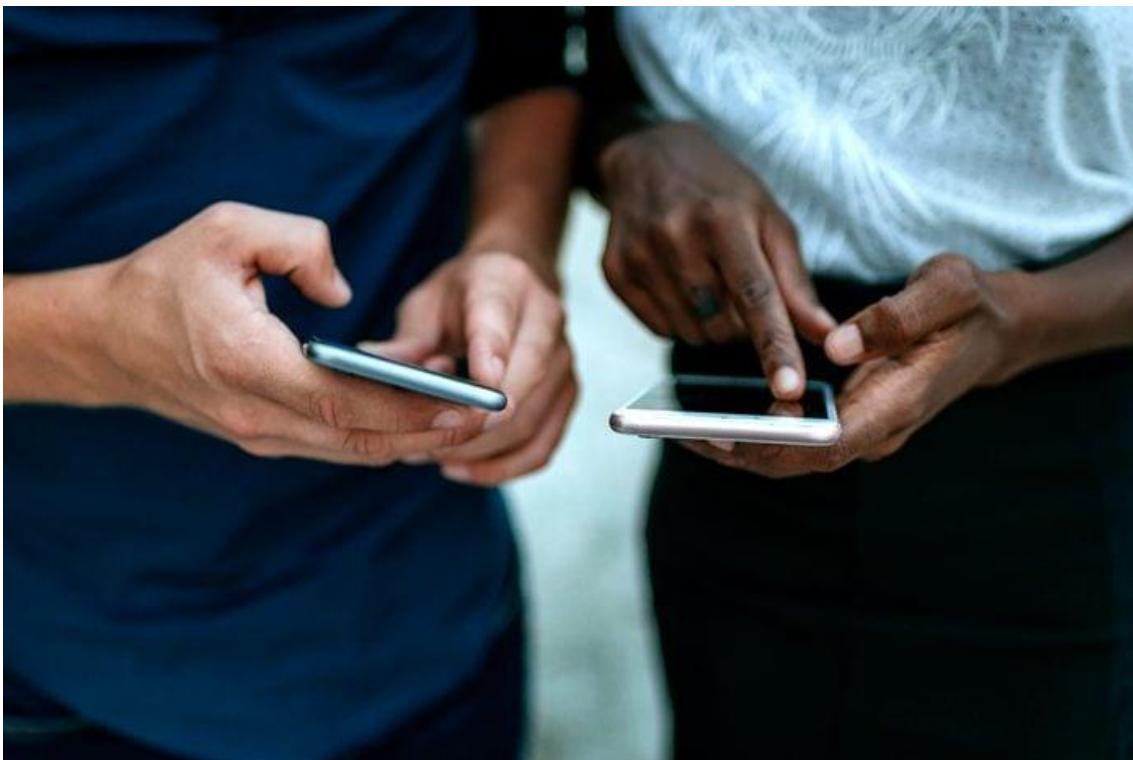
## Who among us has not experienced the following scenario?

Engage in a conversation at home with acquaintances or family members while mobile phones, tablets, or computers are proximate—whether powered on or off—and subsequently, within a span of

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approximately twenty minutes, peruse the internet and you will be confronted by advertisements conspicuously tailored to the topics under discussion moments earlier.

We, at the IDHUS Institute, routinely engage in this precise experiment. A few hours following a discourse concerning the unsatisfactory taste of a newly purchased brand of coffee from a local supermarket, we invariably discover, upon perusing our tablets for daily news, a cascade of advertisements and banners promoting a novel coffee capsule brand that has just debuted at the nearest hypermarket. This phenomenon is not mere conjecture, nor can it be attributed to mere happenstance. It reflects the long-standing modus operandi of such systems. Regrettably, most individuals remain somewhat inattentive to this phenomenon, as the subtleties elude their conscious awareness.



All electronic devices continuously transmit everything they pick up from the environment

Entities like Amazon, Facebook, and Google subsist on the data they collect from us, constituting the bedrock of their economic enterprise. Consequently, they commodify and employ our data to furnish us with



advertisements, which, for the time being, are tailored with a degree of personalization. The mechanisms underpinning this practice do not entail a human intervention to scrutinize the content of our interactions with Alexa, Siri, or Ok Google. Rather, it hinges upon a multitude of algorithms and artificial intelligence systems capable of swift and highly efficient analysis of the data amassed by our mobile devices and tablets, irrespective of their powered state (as they remain active) or the ambient information gleaned by smart speakers discreetly situated within our domestic milieu.

## Is it indeed a straightforward endeavor to engage in what could be perceived as user surveillance?

None of these corporate entities openly confess or acknowledge that the provision of such highly personalized advertising constitutes a form of espionage. This lack of acknowledgment is grounded in the fact that we, as consumers, have willingly consented to their privacy policies without diligently perusing them.

Concurrently, we have introduced an array of microphones into our households through the adoption of various technological and mobile devices, further compounded by the ubiquity of internet connectivity within our appliances. Indeed, our homes have become part of the ever-expanding Internet of Things (IoT) ecosystem, where an automated vacuum cleaner diligently compiles data pertaining to our living spaces' dimensions and characteristics, forwarding this information to a central repository. Meanwhile, an assortment of connected devices routinely transmits data via Wi-Fi and IoT protocols, thus facilitating our daily routines with minimal human intervention.

Consequently, home automation and smart residences are experiencing a surge in popularity, coinciding with an escalating demand for

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voice-activated systems that assume control over an array of household functions. The convenience of arriving home and vocally commanding various tasks, such as heating activation, shower initiation, or oven preheating, cannot be overstated.



Most of the devices in our homes are already connected, or will be in the near future, to the internet

As we set aside our belongings and don our slippers, we find our living rooms accommodating us with a television already tuned to our preferred channel, its volume adjusted to our perceived comfort. This is no longer a figment of science fiction; instead, it is a reality manifested through numerous models and technologies designed for smart homes. In Southeast Asian countries such as South Korea and Japan, this technology has become commonplace, with similar trends observed in the United States and other technologically advanced regions where populations exhibit a greater propensity for embracing such conveniences with alacrity.

Artificial intelligence (AI), in this context, stands as an area of research marked by substantial societal impact and continuous expansion throughout 2023 and beyond. Both OpenAI, Microsoft and Google have developed their proprietary AIs, which orchestrate the logistics involved in



parcel deliveries and internet search operations, respectively. Facebook, too, has harnessed AI to segment news content based on geographic and demographic considerations, alongside the uncanny ability to inundate your social media wall with advertisements for coffee, mere minutes after discussing it vocally. It is essential to note that these AIs share a defining characteristic: they evolve and refine their capabilities through self-learning, deriving insights from an ever-increasing volume of input data that fuels their operations and algorithms. Consequently, the terminologies of Machine Learning, Deep Learning, and neural networks, while apt, may fall short in encapsulating the computational prowess and adaptive learning capacities that these AI systems steadily accrue.

This scientific and mathematical domain remains a frontier awaiting exploration, its boundaries and future trajectories still veiled in uncertainty. Everyday household applications involving AI-powered appliances have become routine, permitting us to simplify our lives, albeit in circumstances where manual control might not be unduly complex. Nevertheless, the intrinsic inclination toward convenience inherent to human nature underpins our enthusiastic reception of technology that executes tasks at our verbal command.

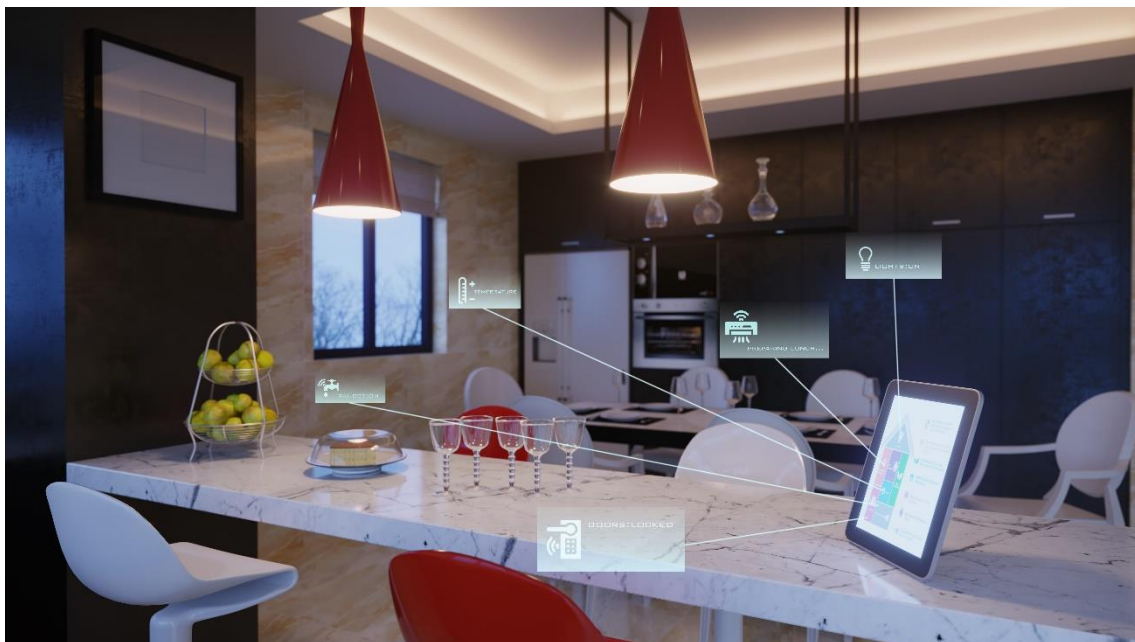
## Not for everyone

Admittedly, not all households have immediately embraced this paradigm shift, as some remain skeptical about relinquishing control over facets of domestic logistics, envisioning scenarios where a refrigerator autonomously places an order for milk through a supermarket app once the supply is depleted. However, historical trends over the past five years underscore an exponential increase in the positive perception that individuals harbor regarding intelligent and robotic domestic assistance.

Perhaps the current absence of concerns related to the encroachment upon our integrity and control lies in the inherent limitations of these systems. They are meticulously designed to cater to specific


functions, with a refrigerator capable of assessing milk levels but inept at managing showers or washing machines. Similarly, Google Home and Amazon's Alexa serve as repositories of information and sources of responses to inquiries, their functionalities delimited by present programming parameters. Should we elect to broaden their purview, following the anticipated overcoming of privacy invasion reservations, we would merely need to embed a comparable AI framework into additional devices tasked with overseeing the television, oven, shower, and washing machine.

## The inception of transformative technological advancements invariably adheres to a loss of privacy



The integration of a novel technology into society typically commences by embedding a few discreet instances of this innovation within innocuous, ostensibly beneficial frameworks designed to augment human convenience. This strategic approach is undertaken with the explicit purpose of acclimating a select group of consumers, thereby establishing





them as unwitting conduits, functioning as Trojan horses, to penetrate the most resistant strata of society. This intricate choreography is deemed necessary, as the activation of inherent psychological factors and anxieties that permeate the human psyche would be a plausible consequence. These anxieties often revolve around concerns pertaining to a loss of control over one's domestic environment or the inadvertent violation of the sanctity of private discourse within the confines of one's marital chamber.

For those who habitually slumber with their mobile devices proximate to their resting heads, disconcerting revelations emerge, as there exists no plausible manner in which the device's microphone remains inoperative during conversations. Subsequent to these nocturnal exchanges, the following day unveils an assortment of advertisements and news items, exquisitely tailored to the content of the preceding discourse. Importantly, this phenomenon does not entail human eavesdropping; instead, it is facilitated by algorithms intricately linked to voice recognition systems, operating under the aegis of artificial intelligence frameworks that govern various segments of the populace and the corporate domains, ultimately responsible for delivering these personalized advertisements.

For those utilizing mobile devices with Google's Android operating system, or Apple's iPhones, the same holds true, albeit facilitated through these respective corporate entities. Similarly, when employing computers, one traverses a digital landscape dominated by the omnipresent influence of Facebook, Amazon, Google, and Microsoft, collectively ensuring the pervasive dissemination of advertisements for the "delightful" coffee capsules positioned to supplant one's "inferior" selections, irrespective of the online destinations visited or the virtual pathways explored. These corporate entities have assumed unparalleled dominance in the marketplace, leveraging the data they glean from us, often offered freely and unwittingly.

A prevalent misconception harbored by a substantial segment of the population revolves around the notion of being "spied upon" to ascertain culpability for illicit activities. This perceptual framework frequently


engenders a complacency regarding personal privacy, grounded in the assumption that most individuals neither commit nor plan illegal deeds.

Consequently, there exists a pervasive indifference to the knowledge of our online activities, domestic conversations, or mobile device interactions, all of which are meticulously cataloged and analyzed. It is essential to recognize that the primary objective of these technological management systems is not surveillance for legal transgressions, but rather the construction of intricate psychological profiles designed to comprehend individuals on a level exceeding their self-awareness. In essence, these technological behemoths have amassed a wealth of data about our private lives, garnered through our daily actions, thereby affording them the capacity to predict our desires, needs, and consumptive inclinations before we ourselves consciously contemplate them.



The goal is to have as clear and real a psychological profile of each consumer as possible in order to deliver hyper-personalised advertisements of what can really be sold to them

This prescience is made possible due to the prevalence of subconscious components comprising a significant portion of our personalities, as well as the ingrained patterns of behavior dictated by habitual routines and learned responses developed over time. When an algorithm discerns that an individual has placed identical product orders on fifty separate occasions, clicked upon a particular news category thirty-eight times, or perused a specific website on three hundred occasions within a defined temporal window, it assembles a comprehensive user




profile. Even when the user's recollection is fallible, these computer systems retain an indelible record, perpetually refining and augmenting the user profile with each subsequent interaction. Consequently, these systems possess a superior understanding of an individual's subconscious desires and objectives compared to the individual's own conscious self-awareness.

The orchestration of appropriately targeted advertisements across platforms signed into, say, a Chrome browser, is not a matter of science fiction or conspiracy theories surrounding governmental surveillance (although some governments may engage in similar practices through alternate methodologies). Instead, it symbolizes the relentless quest to garner insights into the lives of billions of consumers, knowledge that supersedes self-awareness, for these consumers serve as the lifeblood of the global economy. Only through this comprehensive understanding can corporations exclusively tailor their offerings to consumers' predilections, preferences, and necessities, thus ensuring perpetual consumption and ease of access to desired goods and services.

The pervasive occurrence of finding oneself targeted by extensive advertising campaigns that seem to react with startling precision to one's spoken remarks, such as casually mentioning the depletion of toilet paper at home only to subsequently encounter mobile ads featuring a new pine-scented roll, may still elicit a degree of astonishment. Yet, this phenomenon encapsulates a fundamental paradigm shift in the advertising landscape. For many brands, the feasibility of executing large-scale, generic advertising campaigns via conventional mediums like television commercials or billboards remains economically unsustainable. While such conventional campaigns persist, the crux of modern marketing hinges upon population segmentation, the complete individualization of the consumer experience, and the precise delivery of products that align with the explicit preferences and recent activities of each person.

As long as societal indifference prevails with regard to this transformative state of affairs—a viewpoint we, at the IDHUS, believe warrants scrutiny—there remains an absence of regulatory frameworks,



laws, or norms capable of curbing the pivotal role played by major technology corporations in reshaping the economic fabric of society through the manipulation of collective and individual psyches. These corporations adeptly navigate the terrain of data-driven marketing, offering products that resonate with consumers' self-perceptions, all while infiltrating our sensory experience through every newspaper read on a tablet or every browser search conducted.

As algorithms continue to refine their efficiency and artificial intelligences (IAs) augment their analytical capacities, the prospect emerges of personalized mobile advertisements that do not intrude upon the mobile devices of our associates, as these ads respond solely to our expressed desires and preferences. Although this level of granularity remains an area undergoing refinement and technological development, not yet fully actualized, it is poised to advance, possibly to the extent of individualized segmentation. In the present landscape, such precision may be limited to family units, but it is foreseeable that even more granular targeting will emerge in due course.


Concurrently, the automated household robots, well-versed in the intimate details of a domicile's contents, square footage, room layouts, and available spaces for new furnishings, are on the cusp of ushering in an era where screen-based advertisements and mobile notifications will proactively offer furniture ideally suited to that slender gap between the sofa and the column, a gap that only the recently designed Ikea wardrobe can fill.

These data are shared among various corporate entities, constituting a commodifiable market, and the organizations that amass such data employ legal mechanisms to facilitate their exchange without transgressing the myriad clauses of privacy that remain largely unread by end-users, who are often eager to install new applications and hastily consent to the treatment of their personal data according to the collecting company's discretion. These legal compliance measures, however, do not impede the ceaseless data collection that provides multifaceted benefits to businesses



In August 2022, Amazon bought iRobot, the company that makes one of the best-selling robot hoovers on the market, not just for the product, but for the information about the homes, dimensions and spaces that iRobot collects from every machine it sells and connects to the internet in every home


Returning to the central inquiry—Is this phenomenon inherently negative? The response is nuanced, with the prevailing sentiment leaning towards an affirmative stance for the majority of individuals. Nevertheless, there exists a contrasting majority that perceives this transformation through a more sanguine lens. From the vantage point of the latter, the ability to access advertisements for a precisely tailored furniture piece in response to an explicit spatial constraint—such as having only 30 centimeters of available space between a sofa and a column—upon opening a mobile device represents a utopian societal paradigm. In this perspective, the convenience of immediate access to precisely what one needs via a single click underscores the tangible benefits derived from a landscape where exhaustive visits to local furniture stores or protracted online catalog searches are rendered obsolete.



This rationale is fundamentally sound and aligns with the perspective held by the IDHUS. We do not inherently oppose technological advancement; in fact, it welcomes the burgeoning developments in applications and recognizes their potential, as elucidated in the earlier sections of this report that explore the transformative possibilities ushered in by 5G, the Internet of Things (IoT), and blockchain technologies. The primary concern voiced here pertains to the broader ramifications of these advancements on aspects of our lives, chiefly, privacy and the erosion of anonymity, conceptualized as the inability to escape the digital realm and disengage from the pervasive utilization of products offered by major technology conglomerates to facilitate our daily routines.

Numerous experiments have been conducted wherein journalists, cognizant of the subtle presence of "covert" advertising, attempted to disengage and lead lives devoid of Google, Amazon, Microsoft, or Facebook. Such endeavors proved to be untenable. Unless one resides in an exceptionally remote enclave, living beyond the reach of the prevailing social and commercial ecosystem in which the majority of the global population operates, it is virtually impossible to navigate the quotidian tasks of modern existence without, at some point during the day, relying on the services proffered by these corporate giants. Microsoft commands dominion over all Windows-based computers, Google governs the entirety of the internet and the extensive spectrum of Android mobile devices, Apple exerts control over Macs and iPhones, Amazon presides over the majority of retail transactions, similar to Alibaba in China, and Facebook exercises significant influence over news dissemination and social interactions. Although one may abstain from interaction with these entities for a brief interval, leading a conventional "professional" and "social" life devoid of their technologies is unfeasible.

Consequently, the prevailing system appears to have triumphed, at least for the foreseeable future. The onus of control now squarely rests upon the end user, irrespective of whether they possess an awareness of the extent to which they are exposed when engaging with the technology discreetly introduced into every household by these corporate behemoths.



The subsequent transmission of these data to governmental entities constitutes a distinct matter, a practice that undeniably transpires. Thus, these technological juggernauts constitute the initial conduit through which individuals within any society, across the globe, are subjected to some form of surveillance. Importantly, this observation does not encompass conspiratorial conjectures. It reflects the routine operational dynamics of the system under which we currently exist. Notably, the themes explored in the television series "Black Mirror" are not premised upon hypothetical constructs but, rather, draw inspiration from existing or imminent implementations that may not be immediately evident to the public, rendering them less conspicuous than conventional surveillance systems.

As long as society maintains its present level of consciousness regarding privacy and remains indifferent to the implications of the extensive knowledge acquired concerning our actions and inactions, no avenue exists for effecting substantive changes to the trajectory in which economic interests driving technologies such as voice recognition, homegrown artificial intelligence, and internet-connected appliances continue to proliferate. These technologies undoubtedly enhance convenience and comfort, yet they concurrently entail an incremental surrender of our privacy and control, as major corporations preempt our desires, delivering products we did not even know we sought before expressing the intent.



## In conclusion

The intricate interplay between advancing technology, privacy, and individual agency underscores a dynamic and multifaceted contemporary landscape. The discussions presented in the preceding pages illuminate the complex consequences of our ever-deepening reliance on technology and the implications this holds for our personal lives and societal structures.

The advent of technologies such as artificial intelligence, voice recognition, the Internet of Things, and targeted advertising has ushered in an era of unparalleled convenience and efficiency. From smart homes that anticipate our needs to personalized advertisements that cater to our desires, these innovations have transformed the way we live, work, and interact with the world.

Yet, this transformation comes at a cost, one that is primarily centered around issues of privacy and control. As the digital footprint we leave behind expands, so too does the scope of surveillance and data collection. Major technology companies, wielding immense influence and power, accumulate vast amounts of personal information, often without our full comprehension or explicit consent. The implications of this data accumulation extend beyond mere convenience and efficiency; they touch upon fundamental aspects of personal autonomy and the very essence of privacy.

While there is no uniform consensus on whether these technological shifts are inherently positive or negative, there is a shared recognition that they demand vigilant examination and thoughtful consideration. We highlight the need for an ongoing and robust dialogue surrounding issues of privacy, data security, and the balance between technological progress and individual agency.

In a rapidly evolving landscape where the boundaries between the digital and physical worlds blur, it is imperative that individuals,



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policymakers, and society as a whole actively engage with these questions. As we navigate the complexities of our technologically driven future, it is through informed dialogue and conscientious decision-making that we can strive to strike a balance between the undeniable benefits of innovation and the preservation of our fundamental rights and values.



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