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Data-Driven Value Extraction and Human Well-Being under EU-law

Abstract

In this article, we explore the intersection between data protection law and consumer protection law in their application to data-driven business models that monetise attention and personal data. We approach European Union law from a constitutional perspective, as in addition to economic harms some aspects of predatory business models also pose a risk for human dignity, human well-being, social welfare and democracy. From a three-tiered model of information asymmetry, it is argued that there is a need to rethink consumer protection in order to restore some sense of equity in commercial interactions online. In that vein social welfare computing can play an important role in combating superficiality and strengthening social cohesion.

Introduction

The purpose of this article is to discuss the application of EU data protection law and marketing law to value extraction in data-driven business models. (This article is partly based on Trzaskowski, 2021c. The author would like to thank Professor Emeritus Eric K. Clemons for valuable comments and suggestions.) In particular, we address how new online business models create new forms of information asymmetry, placing consumers at greater disadvantage relative to retailers, requiring changes to consumer protection laws and regulations. In addition to affecting the economic interests of consumers, some aspects of predatory business models pose a risk for human dignity, human well-being, social welfare and democracy (see also Clemons et al., 2021). Therefore, we will approach European Union law from a constitutional perspective by including reference to guaranteed fundamental (human) rights.

In a market economy, consumers are used to making decisions with asymmetric information *vis-à-vis* the trader (the commercial entity). Consumer protection laws have always been aimed at reducing this information asymmetry. The purpose of food safety laws and their associated inspections and certifications is to enable \ consumers to understand what they are buying, reducing information asymmetry. The purpose of laws regulating truth in advertising is to prevent sellers from creating new forms of information asymmetry in order to deceive consumers. The main argument in this article is that this information asymmetry is now skewed to such a degree that the consumer does not have a fair chance of understanding the personal consequences and societal implications of data-driven business models. Consumer protection law, including the protection of privacy and personal data, must be adapted to restore some sense of equity in online commercial interactions. Indeed, if business models create new abuses, then laws and regulations must be adapted to address those abuses (Clemons, 2019).

The General Data Protection Regulation (Regulation (EU) 2016/679 of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data; hereinafter, GDPR) aims to protect the privacy of citizens, including in their capacity as consumers. The Regulation only applies to the processing of data that is ‘personal’, i.e., any information concerning an identified or identifiable natural person. The protection of personal data is rooted in the Charter of Fundamental Rights of the European Union (hereinafter, the Charter).

The protection of privacy in a broader sense (i.e. also beyond personal data) is similarly rooted in the Charter and expanded upon in the ePrivacy Directive (Articles 5 and 13, respectively, of *Directive* 2002/58/EC as amended by Directive 2009/136/EC; see also proposal of 10 February 2021 for an ePrivacy *Regulation*, 6087/21, 2017/0003 (COD)), which regulates the use of cookies (storing and/or gaining access to information stored in the subscriber’s terminal equipment) and e-mail for direct marketing purposes.

Marketing law (unfair competition law) is harmonised in the Unfair Commercial Practices Directive (Directive 2005/29/EC of 11 May 2005 concerning unfair business-to-consumer commercial practices in the internal market; hereinafter, UCPD), which, inter alia, prohibits misleading and aggressive commercial practices. The aim of the Directive is to protect the economic interests of consumers. Its

definition of unfair commercial practices is sufficiently broad to include concerns pertaining to both privacy and personal data as long as the economic interests of consumers are also at stake.

Consumer protection law, including data protection law in this context, has the advantage that—in contrast to competition law—it applies to traders regardless of market power. Even if there were real competition among providers of, e.g., search and social media (imagine a market with multiple Googles and Facebooks), there are still intrinsic parts of data-driven business models that are likely to infringe on privacy and distort the economic interests of consumers.

Many individuals are unfamiliar both with the philosophy behind many bodies of business law and regulation and the ultimate purpose behind them. Competition Law, also known as Antitrust Law or Monopoly Law, is not aimed at protecting smaller companies from larger ones and indeed is not aimed at limiting or punishing larger companies. Rather, the intent of Competition Law is to protect consumers by ensuring that they enjoy the benefits of competitive markets, that is, to ensure that consumers enjoy greater selection and choice, improved quality, and lower prices, all presumed to be benefits of competitive markets (e.g., Jones & Sufrin, 2016). Likewise, the intent of Consumer Protection and Marketing Law is not to ensure that consumers do not make bad choices or that they do not buy harmful or inferior products. The intent of Consumer Protection and Marketing Law is to ensure that consumers can become adequately informed about the quality of products that they consider purchasing. Consumers cannot by themselves test mass-market industrial-scale food or beverage products for safety and cleanliness, they cannot themselves check the truthfulness of all advertising and marketing claims, and they cannot themselves always detect when online platforms are subtly limiting their choices and manipulating their preferences. Consumer Protection and Marketing Law ensures that consumers can with reasonable effort become adequately informed to make correct decisions, whether or not they choose to become adequately informed, and whether or not they choose to make wise or foolish decisions, is outside the scope of western commercial law. And once again we note that the purpose of Consumer Protection and Marketing Law is about ensuring consumers can be adequately informed, and that the information advantage enjoyed by sellers does not become too excessive. Clearly, online platforms, with their ubiquitous surveillance and their persistent memory and ability to create integrated profiles, create increased information advantage for sellers. Consumer Protection and Marketing Law needs to adapt, to ensure that consumers continue to have the ability to make informed decisions.

The paper has the following structure. The next section is a literature review that reviews quickly material that most readers of this journal consider fundamental to consumer behaviour in online markets, including information asymmetry, commercially-inspired surveillance and data mining, and the use of data on individual consumers to manipulate their opinions, their behaviours, and their purchases. Section 3 relates the enhanced information endowment made available to big platform operators to the monetization of attention in an information age, presenting a novel examination of information asymmetry, the monetization of consumers' attention, and extraction of additional rents, an essential first step in understanding the harm that can be created by surveillance and data mining, beyond the more abstract idea of privacy violations. Section 4 provides a short introduction to legal philosophy and the intended relationship between the law, individual rights, and human dignity in the EU. Section 5 introduces relevant laws and regulatory structures in the EU that are intended to enhance privacy and

limit the potential commercial abuse of surveillance and enhanced information asymmetry. Section 6 shows the relationship between information and consumer protection in the EU. Section 7 provides our conclusions.

Literature Review — Information Economics, Information Systems, Large Platforms, and the Results of Changes in Information Asymmetry

Information Asymmetry, Reduced Gain from Trade, and Market Collapse

Excessive information asymmetry, and excessive information advantage by sellers can lead to buyers discounting willingness to pay, sellers withholding highest-quality goods, and ultimate market collapse (Akerlof, 1970). For example, eBay has struggled with increasing volume of low-quality products and the limits of its community-based feedback mechanisms (Calkins, 2001). Often, markets develop effective mechanisms for achieving great information symmetry. Akerlof and subsequent authors understood the role of used car warranties and the right to independent inspections in reducing information asymmetry (Akerlof, 1970; Emons, 1989; Etzion & Pe'Er, 2014). Clearing corporations and bonded warehouses reduce counterparty risk in commodities exchanges by ensuring that counterparties are capable of honoring their financial obligations and that products delivered (e.g., Egyptian long staple cotton, frozen orange juice concentrate) are authentic and of high quality (Edwards, 1983). Although there are problems with deliberate abuse of online rating systems, both companies and legal authorities are taking steps to limit abuses (Einhorn et al., 2021).

Information Asymmetry, Delayed Revelation, and Consumer Harm

Consumers cannot always assess the quality or safety of industrial-scale food and beverage products until after consumption, and the harm associated with some forms of product quality issues may not be obvious immediately, which is also referred to as unmanifested harm (Miller, 2011). A fundamental purpose of consumer protection, ranging from the Reinheitsgebot in 1516 to ensure the quality of beer in Bavaria (Wikipedia, 2021) to the creation of the American Food and Drug administration (Clemons, 2019), is to ensure that consumers are protected from quality problems that would not be easily detected by them before they were harmed.

Information Asymmetry and Targeted Manipulation in Marketing

In online markets, information asymmetry increases as the platform owners such as Google, Facebook, or Netflix know more about consumers. This information can be used for first-degree price discrimination, that is, pricing tailored to the individual consumer (Shiller, 2013). Displaying targeted advertisements to consumers increases the probability that consumers will search for a specific brand and that they will make an actual purchase (Ghose & Todri-Adamopoulos, 2016). Furthermore, concerns increase that fake news are not only used in politics but also in marketing (Di Domenico et al., 2021; Di Domenico & Visentin, 2020).

Information Technology, Reduced Search Costs, and Improved Market Performance

The advance of information technology has arguably also contributed to reduced search costs and improved market performance. Soon after electronic marketplaces emerged, it has been shown that they reduce the buyers' search costs (Bakos, 1997). Furthermore, due to their easy searchability and discovery tools such as recommender engines, electronic marketplaces provide consumers access to niche products that traditionally were hard to find. These products are part of the "long tail" of the product offerings available on electronic market places and they contribute to an overall improved market performance (Brynjolfsson et al., 2011; Brynjolfsson et al., 2006).

Informedness, Resonance Marketing, and Consumer Delight

In the Internet, an enormous amount of information is available to consumers—this includes not only product information but also online reviews of other consumers. With increasing informedness, consumers are aware what products are available to them and which of them best address their individual preferences (Clemons & Gao, 2008). Companies react with hyperdifferentiation, that is, tailoring their products to individual consumers as far as possible and consumers "respond most powerfully to products that precisely meet their cravings and longings, wants and desires" (resonance marketing) (Clemons et al., 2006, p. 151). Thus, companies compete by providing delight for their individual consumers rather than by price (Clemons et al., 2005). In doing so, they tap into the long tail of products for niche consumers, and as a result, more consumers can access products that address their individual needs and create delight. (Clemons & Gao, 2008; Clemons et al., 2006; Markopoulos & Clemons, 2013; Clemons et al., 2005)

Alternative Realities, including the Google and Facebook Bubbles

While in theory, the Internet makes an ever-increasing amount of information available to consumers, the dominance of Big Tech companies such as Google and Facebook has created a situation where few companies control what consumers see. Google began personalizing search results in 2009 and Facebook personalizes the feed that their users get displayed. As a result, consumers live in a so-called filter bubble, that is, they are continuously being served with content that fits to what they consumed in the past (Vaidhyanathan, 2018; Pariser, 2011). This includes news—consumers will most likely see a narrow set of topics and political views that fit their own interest. It also includes advertisements which are individualized based on the consumers previous online behaviour. This approach is most profitable for the Internet companies that can charge companies highly for advertisements that are targeted to individuals and therefore more successful. But at the same time consumers are less and less aware of news and shopping alternatives (Pariser, 2011; Klug & Strang, 2019). (Vaidhyanathan, 2018; Pariser, 2011)

A Summary of Information Asymmetry's Impact on Consumers

The literature shows that as markets become larger, more industrialized, and thus more anonymous, information asymmetry becomes a significant problem. This was historically a problem when industrialization occurred in the capitalist West, but has been equally severe as industrialization emerged in communist nations like China. Problems with food tampering in China are well documented, and these problems are now explicitly linked to information asymmetry (Huang, 2021). Chinese authorities

are acting to limit abuse, and online retailers are taking extraordinary actions to protect their reputations (Clemons et al., 2016; Clemons et al., 2013). Research also shows that online platforms can increase information asymmetry, and increase sellers' ability to manipulate and to abuse consumers. For these reasons, consumer protection law needs to evolve to match changes in production and especially to match changes in online retailing.

Fortunately, not all the changes created by online platforms are harmful to consumers, and some have produced profound benefits, summarized under the terms *long-tail marketing* and *resonance marketing*.

Monetization of Attention as a Mechanism for Value Extraction

The monetisation of attention is at the core of data-driven business models. This is not new or unique to data-driven business models (Wu, 2017). The novelty lies in the scale of the underlying surveillance of behaviour and in how big data—including *personal* data—and behavioural sciences together with artificial intelligence can be used to manufacture consumer behaviour, including increased engagement and 'consent' to the processing of personal data. Therefore we also address manipulation and human dignity below.

The idea of the attention economy was introduced in the 1970s by Herbert A. Simon (Simon, 1971, pp. 40-41):

'in an information-rich world, the wealth of information means a dearth of something else: a scarcity of whatever it is that information consumes. What information consumes is rather obvious: it consumes the attention of its recipients. Hence a wealth of information creates a poverty of attention and a need to allocate that attention efficiently among the overabundance of information sources that might consume it.'

Since the amount and value of attention may be increased by using personal data and sophisticated persuasion, the providers of data-driven business models have an (economic) incentive to optimise surveillance and manipulation. Quite simply, the better a data-driven business understands its users, the more accurately it can target material in order to increase their engagement and to directly manipulate their behaviour (Ghose & Todri-Adamopoulos, 2016) .

In step with our use of and dependency on information technologies, including social media and other digital platforms, it has become possible to extract value from a myriad of technology usages, including for personal and private interactions. This pervasive surveillance includes the extraction of data from a user's whereabouts by monitoring GPS locations and interactions by monitoring where the user shops and who interacts with him socially. Surveillance goes beyond this macro-level activities and includes monitoring the contents of private conversations in individual texts, e-mail messages, and voice-calls (see, e.g., Zuboff, 2019).

Computers—including, in particular, smart-phones—provide a pervasive alternative and individualized view of reality designed for each user, who is often under significant and continuous surveillance

(Zuboff, 2019). This individualized alternative reality—which is often mediated by technology providers—can easily be confused with ‘real’ reality and by intersubjectivity may become a real reality (on the fundamental role of intersubjectivity throughout history see Harari, 2015).

Data-driven business models exist in both online and offline environments and usually rely on the monetisation of (1) personal data that is collected from surveillance of behaviour and/or (2) attention, by means of personalised marketing, including targeted advertising (Trzaskowski, 2021a; Selz, 2020; Spiekermann et al., 2015).

Other related types of value extraction include benefiting from users’ content creation, relationships, psychological needs, anxieties, etc. For example, many websites, like TikTok and Instagram, claim ownership of content posted by consumers (Gleason, 2020).

Law, human dignity and human well-being

The protection of privacy and personal data, in addition to ensuring a high level of consumer protection, follows from primary law, i.e., law on treaty level, which includes the Charter. Both the GDPR and the UCPD are secondary law, meaning that these legal instruments derive their authority from a higher level of the legal hierarchy, i.e., primary law.

This hierarchy is important, as primary law can be perceived as a lens through which secondary law should be observed. Teleological interpretation necessitates that ‘every provision of [EU] law must be placed in its context and interpreted in the light of the provisions of [EU] law as a whole, regard being had to the objectives thereof and to its state of evolution at the date on which the provision in question is to be applied’ (Case C-283/81, *CILFIT v Ministero della Sanità*, Paragraph 20).

It follows from Article 2 of the Treaty of the European Union (TEU) that ‘The Union is founded on the values of respect for human dignity, freedom, democracy, equality, the rule of law and respect for human rights [...]’. In addition, it follows from Article 3(1) TEU that ‘the Union’s aim is to promote peace, its values and the well-being of its peoples’. (See similarly the phrase ‘Life, Liberty and the pursuit of Happiness’ in the United States Declaration of Independence and the United States Supreme Court decision in *Olmstead v. United States*, 277 U.S. 438 (1928): ‘The makers of our Constitution undertook to secure conditions favorable to the pursuit of happiness. They recognized the significance of man’s spiritual nature, of his feelings, and of his intellect.’)

Article 3(3) TEU provides that ‘the Union shall establish an internal market’ that ‘shall work for the sustainable development of Europe based on balanced economic growth and price stability, a highly competitive social market economy, aiming at full employment and social progress, and a high level of protection and improvement of the quality of the environment.’ In addition the Internal Market shall, inter alia, ‘promote scientific and technological advance’, ‘combat social exclusion and discrimination’, ‘promote social justice and protection’ and ‘promote economic, social and territorial cohesion’.

First of all, it is important to note that law is not an end in itself, but a means to protect certain values. Neil Postman describes the American Constitution (and hence American democracy) as a ‘hypothesis’ (Postman, 1995, p. 71) that must be challenged to develop. Secondly, human well-being and human dignity are at the centre of the aims of the EU treaties, and in the following we will use these terms to include the mentioned values such as freedom, democracy, equality and the rule of law. Thirdly, the market is also not an end in itself but a means to ensure sustainable development and ‘balanced’ economic growth, the efficient allocation of goods and services, the development of pricing signals to guide the allocation investment funds and the allocation of labour, etc.

In the early stages of the development of EU consumer policy, it was also emphasised that ‘the improvement of the quality of life is one of the tasks of the Community and as such implies protecting the health, safety and economic interests of the consumer’. (Council Resolution of 14 April 1975 on a preliminary programme of the European Economic Community for a consumer protection and information policy and Preliminary programme of the European Economic Community for a consumer protection and information policy, OJ, C 92, 25 April 1975, pp. 1–16, Recital 2.) The U.S. President John F. Kennedy also mentioned, that the aims of consumer protection were important to ‘the well-being of American family’ and should ensure that consumers could ‘enjoy greater recreation opportunities’ (Kennedy, 1962).

It follows from Recital 2 GDPR that the Regulation is ‘intended to contribute to the accomplishment of an area of freedom, security and justice and of an economic union, to economic and social progress, to the strengthening and the convergence of the economies within the internal market, and to *the well-being of natural persons*’ (emphasis added), whereas consumer law generally focuses on the (internal) market with a view to ensuring the free movement of goods and services as well as the freedom of establishment.

Article 169 (concerning ‘consumer protection’) of the Treaty on the Functioning of the European Union (TFEU) explicitly mentions ‘the health, safety and economic interests of consumers’. We argue that data-driven business models at the predatory end of a benign–predatory continuum infringe not only on the economic interests of consumers but also on the interests relating to health and safety. In addition, the more or less unintended consequences of these business models include negative effects on social coherence and the democratic debate.

Data-driven business models rely on the commercialisation and commoditisation of human attention and the human experience (see in general Lanier, 2013; Zuboff, 2019). Addictive technology and persuasive design may undermine human agency. Likewise, the commercialisation of all individual behaviour—public and private— may undermine human dignity. This leads to less empathy and increased loneliness, which negatively impacts both personal health and social cohesion (see in general Hertz, 2020). Furthermore, algorithms that are designed to maintain user attention and improve user engagement on, for instance, social media and similar platforms are more likely to lead to conflict and polarisation) (see, e.g., Pariser, 2011; Bartlett, 2018) than the informed debate that the democratic hypothesis relies on) (see also Vaidhyanathan, 2018).

As Clemons explains, decisions to advertise on Google may be driven more by fear of disappearing than the desire for paid exposure (Clemons, 2019). In our context, Facebook and other social media have similar power to make natural (as well as legal) persons disappear if they do not deliver the engagement (or payment) required by the algorithms for exposure. Of course, the legal or natural person will only disappear from the virtual reality, but if important connections and activities of the persons are not sufficiently rooted in the physical world, existence there is also threatened.

As observed by Tristan Harris: ‘We face genuine existential threats that require urgent attention’ (Harris, 2021).

Consumer protection law, including the protection of personal data

The UCPD aims to protect the economic interests of consumers by prohibiting commercial practices that are unfair. This provides a flexible framework that aims to ensure that consumers’ decisions are not being distorted by misleading information (including the omission of ‘material information’) or aggressive conducts.

From a business’s perspective, the GDPR can be explained in six overarching principles: legitimacy, proportionality, empowerment, transparency, accountability and security (Trzaskowski, 2021b). The requirement of legitimacy entails that ‘data controllers’ need a ‘legitimate basis’ for the processing of personal data. The legitimate basis must be proportionate to the aim pursued by the data controller and the degree of infringement on the data subjects’ privacy.

For surveillance, re-use of personal data obtained from delivering the primary product (e.g., the social media service) and most types of personalised marketing (including targeted advertising), consent must be the appropriate legitimate basis. According to the ePrivacy Directive, (separate) consent must be obtained for the use of cookies and e-mail for direct marketing purposes (Trzaskowski, 2021a).

Consent must constitute a genuine and informed choice. The genuine choice can, in particular, be questioned when the consumer is unable to refuse or withdraw consent *without detriment*. There are also situations where the user’s dependency on the service must be considered—i.e., when the service constitutes important—or even critical—infrastructure in democratic, educational, social or economic terms. Research has shown that a surprisingly low percentage of users have given “implicit informed consent” for activities performed by online platforms such as Google and Facebook. That is, surveys of thousands of users show that the percentage of users who both are aware that a given activity is performed using their data *and* have expressed approval of that activity, is generally between 2% and 5% (Clemons et al., 2021).

Arguments from consumer protection law may play a role in data protection law, as the latter requires the processing of personal data to be ‘fair’ and ‘lawful’. The reverse is also true, consumer protection law aims at striking a ‘fair balance’ between traders and consumers; a balance that can be affected by the traders’ processing of personal data (see also Helberger et al., 2017; Svantesson, 2018). Thus, data protection law constitutes an important pillar of consumer protection law.

Both consumer protection law and data protection law rely on human agency, and both aim to secure adequate transparency for and empowerment of the consumer. In that vein, the GDPR constitutes a significant strengthening of consumer protection law, as it also requires legitimacy and accountability as well as providing for significant fines (up to EUR 20,000,000, or in the case of an undertaking, up to 4% of the total worldwide annual turnover of the preceding financial year, whichever is higher). A similar level of fines is introduced to the UCPD with Directive (EU) 2019/2161 as regards the better enforcement and modernisation of Union consumer protection rules.

In contrast to the GDPR, the UCPD is (together with the ePrivacy Directive) broad enough to include privacy concerns beyond the use of ‘personal data’. If the commercial practice affecting privacy does not also concern the economic interests of consumers, it is—from a marketing perspective—a matter of taste and decency, which is regulated under national law.

Human dignity, human agency and the right to self-determination are central concepts in legal theory as well as in consumer protection law, where the regulatory framework is aimed at empowering the consumers to act in accordance with their preferences (Trzaskowski, 2016). Empowerment also permeates data protection law, with consent possibly being the clearest example that elucidates the interplay with transparency.

Empowerment and informed decisions require transparency and the absence of manipulation. This may be difficult to ensure in a context where technology is used both to observe and to shape behaviour (see also Yeung 2017)—at scale as well as across platforms, bearing in mind that ‘surveillance is obviously a fundamental means of social control’ (Westin, 1967, p. 57).

Empowerment and manipulation

There are significant differences among advertising, marketing, persuasion, coercion and manipulation. In defining manipulation, Cass Sunstein suggests focusing on whether the effort in question ‘does [...] *sufficiently* [emphasis added] engage or appeal to [...] the consumer’s] capacity for reflection and deliberation’ (Sunstein, 2016, pp. 215-216. ‘The word “sufficiently” leaves a degree of ambiguity and openness, and properly so.’).

Under the UCPD, a commercial practice is aggressive if—in its factual context, taking account of all its features and circumstances—by harassment, *coercion*, including the use of physical force, or *undue influence*, the commercial practice is likely to (a) significantly impair the average consumer’s freedom of choice or conduct, and (b) likely to cause the average consumer to take a transactional decision that he would not have taken otherwise (Article 8 UCPD, emphasis added).

Undue influence exists when a trader exploits ‘a position of power in relation to the consumer’ so as to apply pressure—even without physical force—if it ‘is likely to significantly impair the average consumer’s freedom of choice or conduct’ (Articles 8 and 2(1)(j) UCPD). Account must be taken of inter alia (a) ‘its timing, location, nature or persistence’ and (b) ‘the use of threatening or *abusive* language or *behaviour*’ (Article 9 UCPD, emphasis added).

Undue influence is not necessarily ‘impermissible influence’, but that is the case when conducts apply ‘a certain degree of pressure’ and in the factual context actively entail ‘the forced conditioning of the consumer’s will’ in a way that is likely to significantly impair the average consumer’s freedom of choice or conduct (Case C-628/17, *Orange Polska*, ECLI:EU:C:2019:480, paragraphs 33–34).

The design of human–computer interaction plays a significant role in how consumers are persuaded and manipulated in the context of data-driven business models (Bond et al., 2012; Mik, 2016; Calo, 2014). Generally speaking, computers have six distinct advantages over traditional media and human persuaders (Fogg, 2002, p. 7), including being more persistent, flexible and scalable. Perhaps most importantly, computers can ‘go where humans cannot go or may not be welcome;’ computers can track every product I consider from my home, or every book or video I consider purchasing, and will remember those that I considered inappropriate or excessively explicit, even if I would never permit a person to observe this behavior. Additionally, computers have perfect memory as well as the ability to evoke feelings through social cues without getting tired and without requiring reciprocity.

One of the key elements of persuasive technology can be distilled into a matter of dispensing ‘friction’ (Fogg, 2002; McNamee, 2020), which relies on (what Daniel Kahneman has identified as) the preference for ‘cognitive ease’ (Kahneman, 2011, p. 67). By increasing or reducing friction to design a ‘path of least resistance’, the user can be nudged in a desired direction. Most consumers remain unaware of how the user-experience is designed for the individual. Both Amazon’s recommendations and Google’s sponsored links are designed to guide consumers to specific purchases by reducing the effort or ‘friction’ needed to select these over all others.

Generally speaking, behaviour is affected by motivation, ability and prompts (Fogg, 2020). A nostalgic view of marketing may assume that creating *motivation* is key, whereas today the main focus—especially in digital marketing—is to increase *ability* (by removing friction: ‘it’s free!’, ‘click here!’) and to use *prompts* (‘act now!’).

At least in some instances, the exploitation of known flaws in human decision-making—including by use of personal data and interface design—runs contrary to the requirement of professional diligence and is likely to constitute an unfair (aggressive) commercial practice (Trzaskowski, 2016, p. 46). This must also be considered in the context of obtaining consent for the processing of personal data.

The impacts of addictive and persuasive design of technology in the form of user interfaces may be more a matter of human well-being and product safety(see, e.g., European Commission, 2020b) than marketing law and data protection law. However, the awareness of its existence and the implications thereof may be important in a more holistic assessment of the legality of data-driven business models, including the extent to which the use of personal data is appropriate, considering the requirements of legitimacy, proportionality and accountability. The same goes for commercial practices, where ‘full account should be taken of the context of the individual case’ (recital 7 UCPD).

In that vein, Article 5 of the Proposal for an EU Artificial Intelligence Act (proposal of 21 April, COM(2021) 206 final, 2021/0106 (COD)) seeks to prohibit a number of particularly harmful AI

practices. For businesses deploying AI in the context of their interaction with consumers, these two prohibitions are relevant:

(a) the placing on the market, putting into service or use of an AI system that deploys subliminal techniques beyond a person's consciousness in order to materially distort a person's behaviour in a manner that causes or is likely to cause that person or another person physical or psychological harm;

(b) the placing on the market, putting into service or use of an AI system that exploits any of the vulnerabilities of a specific group of persons due to their age, physical or mental disability, in order to materially distort the behaviour of a person pertaining to that group in a manner that causes or is likely to cause that person or another person physical or psychological harm;

The focus on 'subliminal techniques' is interesting as (1) many aspects of data-driven business models remain beyond the user's consciousness and (2) these techniques are recognised as unlawful *per se*. For instance, Article 9(1)(b) of the Audiovisual Media Services Directive (Directive 2010/13/EU of 10 March 2010) explicitly prohibits the use of subliminal techniques in audio-visual commercial communications. According to the explanatory memorandum of the proposed EU Artificial Intelligence Act, the focus should be on 'practices that have a significant potential to manipulate persons through subliminal techniques beyond their consciousness' (p. 12 of the proposal).

It is relevant to note that the proposed EU Artificial Intelligence Act focuses on physical and psychological harm but not on economic harm as regulated in the UCPD. Given the wide range of interconnected potential harms from data-driven business models, there may be a need to rethink consumer protection law in order to ensure both horizontal coherence (between legal disciplines and different harms) and vertical coherence (with fundamental rights).

Information and transparency

Transparency is closely linked to the consumer's right to self-determination, according to which consumers are presumed to take informed decisions in accordance with their preferences. From a consumer protection perspective, information has been identified as the 'best means of promoting free trade in openly competitive markets', where the presumption is 'that consumers will inform themselves about the quality and price of products and will make intelligent choices' (Opinion of Advocate General Fennelly in Case C-220/98, *Estée Lauder*, ECLI:EU:C:1999:425, paragraph 25).

Transparency is a prerequisite for empowerment (see, e.g., Case C-54/17, *Wind Tre*, ECLI:EU:C:2018:710, paragraph 45: A 'free choice' supposes, in particular, that information provided is 'clear and adequate'), and information requirements permeate both consumer protection law and data protection law. In a market economy, consumers are assumed to exercise due care and read information, but we must understand how personalisation and choice architecture may impact agency and undermine empowerment.

It is important to emphasise that information does not equal transparency. Information must be read, decoded and understood. In addition, consumers must make a vast number of decisions every day based on goals, preferences, experience and available information. In general, efficient decisions rely on consumers' ability to overcome: (1) searching costs (the cost of gathering and comparing information), (2) switching costs (the cost of changing providers and testing new brands or products) and (3) bounded rationality (biases and heuristics in human decision making) (Trzaskowski 2018). In most cases consumers have no ability to influence the terms of service they are presented with online, and it may thus, as discussed below, be an efficient strategy not to read all available information.

Transparency is also important in data protection law, including compliance with the purpose limitation in GDPR Article 5(1)(b), which requires that personal data be collected only for specified, *explicit* and legitimate purposes. Similarly, consent must be both specific and *informed*. In addition, the request for consent must be presented in a manner that is clearly distinguishable from other matters, such as contractual terms (Article 7(2) GDPR).

The use of an average user/consumer as a benchmark for understanding information requires that the courts balance the trader's obligation to provide clear and comprehensible information against the consumer's obligation to devote attention and cognition to comprehending the information.

The information paradigm and information asymmetry

The 'information paradigm' that permeates EU consumer policies(see, e.g., Reich et al., 2014, pp. 21-22) relies primarily on two assumptions: (1) information is recognised as the least intrusive (and thus, the preferred) form of market intervention, and (2) consumers are *able* to read, understand and consider available information so as to make informed ('rational') decisions.

In both consumer protection law (see Case C-628/17, *Orange Polska*, ECLI:EU:C:2019:480) and data protection law (see Case C-673/17, *Planet49*, ECLI:EU:C:2019:801), it seems sufficient that the consumer has been able to read information in order to make an informed decision, probably assuming that the decision of not reading information is a sufficiently informed decision in itself.

However, it is required that the trader exercise sufficient care—in both *substance* and *form*—to convey mandated information. This may include a consideration of 'the words and depictions used as well as the location, size, colour, font, language, syntax and punctuation of [...] various elements' (Case C-195/14, *Teekanne*, ECLI:EU:C:2015:361, paragraph 43).

In general, consumers are considered to be in a weaker position *vis-à-vis* traders in a commercial transaction between such two parties. Information is power, and information asymmetry is important to the rationale for protecting consumers. In this context, the relevant powers are those that relate to markets where traders are offering competing products and where consumers are expected to make rational decisions for markets to work properly.

Power is not necessarily measured in the trader's market share and may also comprise powers that can be exercised over individual consumers. This is one reason why data protection law and consumer protection law are important supplements to competition law in the regulation of data-driven business models.

In order to discuss data-driven business models from a consumer protection perspective, it may be helpful to focus on three tiers of information asymmetry which relate to (1) the offer, (2) human behaviour and (3) the user (see Trzaskowski, 2021c).

Tier 1. Traditionally, the term 'information asymmetry' has been used to describe the fact that the seller (normally) has more information about himself and his products than the prospective buyer (the consumer) has (see, e.g., Akerlof, 1970).

Tier 2. Naturally, the trader has an interest in what makes people buy. This interest has grown significantly in step with the rise of mass markets and mass marketing since the late 19th century. Scientific publications on this topic started to emerge in the early 20th century (see, e.g., Bernays, 1928; Laird, 1935). Information on human decision-making is gathered, inter alia, by applying psychological insights, observing human behaviour and studying the brain (see, e.g., Kahneman, 2011). These insights may be boiled down to the concept of 'bounded rationality' (Simon, 1956), which includes 'bounded willpower' (Baumeister & Tierney, 2012). Psychological insights are also used to design persuasive technology to affect attitudes and behaviours of consumers (see in particular Fogg, 2002). Similar insights can be deduced by means of big data analytics.

Tier 3. The third tier of information asymmetry concerns knowledge about individual human beings (personal data). Coupled with detailed knowledge about the behaviour of many other people, this information is valuable for predicting (in probabilistic terms: 'people who are like you tend to behave in this way') the behaviour of individuals, including how best to guide their behaviour in a desired direction by creating a 'persuasion profile' (Pariser, 2011, p. 121).

All three tiers of information asymmetry have always played a part in marketing, but with digital technologies, their relative importance has shifted tremendously. In particular, Tier 3 has become automated and scalable, and behavioural tracking capabilities have also added to the sophistication of Tier 2.

Personalisation can be used to customise the user experience, marketing, products, prices, contract terms, etc. What is particularly important about Tier 3 is that every user is treated differently, with the consequent risk that they will lose their sense of direction. This is similar to the general loss of direction created by the careful design of shopping malls (Underhill, 2005); but in data-driven business models, the shopping mall can be designed for each individual, who has no means of comparing her experience with that of other individuals.

Access to artificial intelligence—including the use of big data, algorithms, machine learning and deep learning—coupled with behavioural sciences and personal data means that the trader is very likely to know more about how individual consumers are *likely to behave* and *can be persuaded* than the consumers know themselves.

Tier 1, by comparison, has been largely irrelevant for at least half a century (Neumeier, 2005, pp. 38-39)—beyond, of course, compliance with mandatory information requirements.

As observed by Douglas Rushkoff, an ‘internet run by commercial interests means more than just customized banner ads and spam. It is a world more contained and controllable than a theme park, where the techniques of influence can be embedded in every frame and button.’ (Rushkoff, 2000, p. 257).

Modifying Consumer Protection and Marketing Law to Level Information Asymmetries

From an economic perspective, disclosure of information is an inexpensive way of levelling information asymmetries, at least for the first tier of information asymmetry. For the second and third tiers of information asymmetry, it may be relatively easy to convey information about what the trader does, but real personal consequences for the consumer may be much more difficult to tease out. It may, e.g., be straightforward to explain that personal data are collected—and possibly shared with partners—for marketing purposes and that the user experience is adjusted to ‘personal preferences’, but it may not be clear what information will be filtered out and how the personalisation is likely to affect the individual consumer’s decision-making (her ‘economic interests’).

Disclosure of the strategies and tactics behind behavioural design—the often invisible use of coercion and constraints—may help to level out this asymmetry, especially if it includes information about how human decision-making is (likely to be) affected. However, this is not commonly done; and to meaningfully explain the use of behavioural insights in human–computer interaction and marketing may be difficult if the trader wants to appear trustworthy. Understanding its impact requires significant effort—including self-insight—from the consumer (Sagarin et al., 2002).

It should be obvious that the information paradigm has its limitations and that there is a need to explore other means for levelling information asymmetries, including by means of marketing law and data protection law. To the extent information asymmetries cannot be sufficiently levelled, it may be necessary to pass legislation that restrict the use or abuse of these asymmetries, including the underlying processing of personal data.

When it comes information asymmetries, traders have three advantages: (1) they design the experience (persuasion architecture) and the contract terms, etc. and (2) due to economies of scale, they—relative to consumers—can better justify spending resources on learning about persuasive design, whereas (3) the consumers—who must read and understand multiple traders’ terms and other information—on average, are not likely to (fully) comprehend the underlying purposes, techniques and complexities. As ‘marketing guru’ Seth Godin puts it: ‘Marketing is now so powerful that *caveat emptor* is no longer a valid defence.’ (Godin, 2009, p. 123).

We must detach ourselves from the illusion that we can empower users with information alone (see also Weatherill, 2016). If we want to achieve empowerment in a truer sense, we must consider the users' condition as well as the environment in which they are supposed to act. Also as a matter of human dignity, there is likely a need to restrict certain commercial practices, including certain types of data processing, that were never possible before.

By using storytelling and framing effects, privacy infringement may be framed as a benefit or in some other way appear benign. 'Tracking' and 'improving the service' sound better than 'surveillance'; and 'cookies' may appear deliciously benign . . . especially when seasoned with a picture of chocolate chip cookies. As Frank Luntz emphasises in the subtitle of his book: 'it's not what you say, it's what people hear' (Luntz, 2007; see also Lakoff, 2014).

In the context of cookies, it is made explicitly clear that the *methods* for providing information and offering the right to refuse should be as user-friendly as possible (Recital 25 of Directive 2002/58/EC and Recital 66 of Directive 2009/136/EC). This emphasises that providing information is a function of both 'what' and 'how', similar to the distinction between misleading and aggressive practices in the UCPD.

As an example of *proportionality* in the GDPR, transparency in the context of 'automated decision-making, including profiling' (Article 22), entails providing 'meaningful information about the logic involved', as well as information about 'the *significance* and the *envisaged consequences* of such processing for the data subject' (emphasis added). This obligation could serve as inspiration for ensuring overall transparency in the context of data-driven business models.

Similarly, in the Court's decision in the *Planet49* case concerning the ePrivacy Directive, it is mentioned that 'clear and comprehensive information' implies that a user is 'in a position to be able to determine easily the *consequences* of any consent' and that the information must be 'sufficiently detailed so as to enable the user to *comprehend* the functioning of the cookies employed' (Case C-673/17, *Planet49*, ECLI:EU:C:2019:801, paragraph 74 with explicit reference to point 115 of Advocate General Szpunar's opinion. Emphasis added).

The consumer is in general expected to be an active participant in the market, and, in order for the market to function properly, some effort is required. In that vein, it must, however, be borne in mind that consumers (*human beings* as we are) have limited resources with regard to time, cognition, attention, etc. In addition, every trader may have different beliefs about which processing of personal data is absolutely necessary and what commercial practices are fair.

The concepts of information overload (see, e.g., Jacoby, 1984) and rational apathy (deliberate ignorance) (developed in the context of voter ignorance; see Downs, 1957) suggest that there is a limit to what we can comprehend and that it is (often) an efficient strategy to ignore information. It is better to opt for a 'satisficing strategy' rather than a 'maximising strategy', as the latter comes at a significant cost, including the time spent on optimising the structure of information search (Simon, 1956; see also Elster, 2016, pp. 17-18 and 93). To seek legal counsel is seldom economically viable for the consumer.

Thus, there are good reasons for replacing the information paradigm with some sort of communication paradigm that attaches more importance to the receiving end of information (see also Trzaskowski, 2018). Focus could be on the average user's ability to understand the business models of every commercial entity that approaches them, as well as the significance and consequences of the commercial practices involved, including the processing of personal data.

Considering the power of persuasive computing and digital addiction as well as the potential harm to human well-being and democracy, transparency is not always sufficient. Therefore, the absence of manipulation, including by means of subliminal techniques, remains important also to ensure human dignity.

Conclusions: A role for social welfare computing

In his *first law of technology* Melvin Kranzberg pronounced that 'technology is neither good nor bad; nor is it neutral' (Kranzberg, 1986). There is much good to be said about modern information technology, and as demonstrated above there are some significant caveats to consider in the context of data-driven business models.

Consumer protection law, including privacy and data protection, seems like a suitable legal tool to ensure empowerment through transparency and the absence of manipulation, including subliminal techniques in a broad sense. However, its efficiency depends on the Court of Justice of the European Union's interpretation and/or the introduction of new legislation.

Transparency should entail a comprehensible explanation of the significance and consequences of the commercial practices involved, including the processing of personal data. It is important to understand not only which data are being used for personalised marketing, but also when, how and why, so that the consumer may better understand the logic involved and possible consequences.

Even though data-driven business models are guided by economic incentives, the value extraction has consequences beyond the economic interests of consumers. Externalities to these business models include effects on human well-being, social cohesion and democracy. Therefore, it is important to maintain a focus well beyond economic harm.

The respect for human dignity may be an argument both for and against respecting the users' right to 'consent' to such processing that interferes with their right to privacy, depending on the relative emphasis on agency (free will), bounded rationality and information asymmetries.

Like democracies, human beings are antifragile, i.e. they improve with struggle (see Taleb, 2012). Thus empowerment goes hand-in-hand with education. It is important, however, to understand that marketing—in an idealised conception—is supposed to inform consumers in a way that allow them to make rational decisions in markets. Even though markets are extraordinarily important, they rely on human agency and are not more important than human dignity, democracy, social welfare and human well-being.

Regulating data-driven business models may mitigate some of their most damaging effects. However, to combat superficiality and strengthen social cohesion, computers are likely to be a better tool than law . . . bearing in mind that not doing evil is not the same as doing good!

Thus, there is an important role for social welfare computing (Clemons et al., 2021), including the promotion of humane technology (see <<https://www.humanetech.com/>>), which is well aligned with the European Commission's overall digital strategy that seeks to promote technology that works for people (European Commission, 2020a).

However, if people at large do not understand the societal implications and personal consequences of data-driven business models, there is less economic incentive to abandon predatory business models. When we are being manipulated, we often pay with real money, and 'free' services may in fact be quite expensive to use. For a start, it is important to understand that 'paying with personal data' is a misleading framing when we are in fact paying with some of our most precious resources: attention and agency.

On a closing note, one could consider the extent to which technology and markets serve users and societies, and the extent to which technology and markets are now able to use and even abuse consumers.

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