EXTENDED REALITY AND UNFAIR COMMERCIAL PRACTICES: COMBINING LEGAL, ECONOMIC, AND PHILOSOPHICAL PERSPECTIVES

[Philosophical and Methodological Foundations of L&E (including History of Thought]

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ABSTRACT

Virtual and Augmented Reality are one of the technologies with the highest projected potential for growth. According to the latest reports, the global Augmented Reality (AR) and Virtual Reality (VR) market reached 28 billion U.S. dollars in 2021, rising to over 250 billion U.S. dollars by 2028. What makes these two new technologies unique is their immersive nature; that is, their ability to extend the surrounding reality or to create an environment totally different from the physical one, using digital tools to offer users specific perceptual experiences which can induce the feeling of being in another place or in a completely different space.

Although for many years the use of immersive technologies has been associated with the world of video games, the impact of Augmented and Virtual Reality – that are part of a broader category of Extended Reality technologies (XR) – is being felt across many industrial sectors, notably healthcare, hospitality, education and retail. These potentials of XR technologies attracted the curiosity of firms, which are increasingly implementing immersive commercial practices aiming to involve users in a more persuasive way with respect to the traditional forms of advertising and marketing, such as the growing trend is the experiential marketing, which – unlike traditional marketing – consists in offering the public a direct experience of the product or service, being promoted or launched through multi-sensory experiences. Another commercial practice that promises to become popular is XR advertising, e.g. a form of advertising that exploits the potential of virtual and augmented reality to make it more immersive and interactive than its traditional forms.

In market contexts, XR advertising may add value to market efficiency by enabling consumers to receive, perceive and process information about products, services and rights in a deeper, more detailed and realistic way. This certainly can enhance customer

experience and harbour the potential to better match consumer preferences with products. However, they may facilitate the exploitation of consumer weaknesses while searching, evaluating and buying products or, at least, interfere with consumer perception when purchasing. The reason lies on the fact that such immersive technologies work inducing artificial emotions and leverage sensitive data that could be measured and can lead to commercial of a potentially more dangerous manipulative nature than the traditional forms currently used.

Although XR technologies are leading users to new forms of experience of reality and to the innovation of the technological landscape, there is a range of consumer harms in XR technologies, as, for example, physical harms, such as nausea or motion sickness caused by headsets or epileptic seizures due to XR contents. In this potential consumer's harms scenario, this paper aims to contribute to the better understanding of business-to-consumer commercial practices, involving the use of virtual and augmented reality technologies, which raise fairness concerns from the perspective of EU consumer protection policies. First, the Author will offer a conceptual analysis of virtual and augmented reality from the perspective of legal philosophy, introducing the concept of Metaverse. Second, by drawing on the key insights from current economic theory, the paper will explore the different functions through which advertising conveys information to consumers and persuade them to buy products and services. Then the paper will explore the peculiarities of XR-based advertising (due to time limitation, VR and AR advertising will be considered as a unique form of XR advertising), exploring the technical aspects, the representational elements and potential impacts of this new commercial practice on consumers. Third, the paper discusses the current EU legal framework applied to commercial practices and the possible evolution of the current law, due to new challenges in the face of these disruptive technologies, with a focus on Directive 2005/29/CE, the key EU law instrument for safeguarding informed and rational market decisions. Finally, expounding on the conceptual and meta-jurisprudential analysis, the paper will consider an interpretive issue: whether manipulative commercial practices through XR technologies fall under UCPD.

1. INTRODUCTION

The global Augmented Reality (AR) and Virtual Reality (VR) market reached 28 billion U.S. dollars in 2021, rising to over 250 billion U.S. dollars by 2028[1], where VR

[1] 'AR/VR Market Size Worldwide 2021-2028 | Statista' (*Statista*, 2022) <https://www.statista.com/statistics/591181/global-augmented-virtual-reality-market-size/> accessed

gaming, VR video viewing and AR gaming make up the three largest consumer use cases[2]. These two technologies fall into the broader category of Extended Reality (XR), a catch-all term encompassing technologies that augment or create realities (predominantly Virtual Reality (VR), Augmented Reality (AR), and Mixed Reality (MR).

As it will be explored in the next sections, the key essence of these technologies lies in their immersive nature, which gives the users the possibility to experience one's presence in a different environment or to see the surrounding environment altered and induce the feeling of being in another place or in a completely different space.

These potentials attracted the interest of firms, which are implementing immersive commercial practices to engage users in a much more persuasive way than traditional forms of advertising and marketing. For instance, the trend of experiential marketing is growing more and more, which consists of offering the public – unlike traditional marketing – a direct experience of the product or service being promoted or launched through multi-sensory experiences. In experiential marketing, a new form of advertising is arising – known as XR advertising - which by exploiting the potential of virtual and augmented reality, make the advertising more immersive and interactive than its traditional forms. These commercial practices can be an added value for market efficiency, giving consumers the opportunity to receive, perceive and process information about products, services and rights in a more realistic and detailed way but, on the other hand, their ability to induce artificial emotions or affect the sphere of vulnerability of consumers, can lead to manipulative commercial practices more dangerous than the traditional forms that are currently used.

Although XR technologies are leading users to new forms of experience of reality and to the innovation of the technological landscape, there is a range of consumer harms in XR technologies, as, for example, physical harms, such as nausea or motion sickness caused by headsets or epileptic seizures due to XR contents. In this potential consumer's harms scenario, this paper aims to contribute to the better understanding of business-to-consumer commercial practices, involving the use of virtual and augmented reality technologies, which raise fairness concerns from the perspective of EU consumer protection policies. First, the Author will offer a conceptual analysis of virtual and augmented reality from the perspective of legal philosophy, introducing the

10 October 2022.

[2] 'AR/VR Investment Worldwide by Use Case 2024 | Statista' (Statista, 2022) <https://www.statista.com/statistics/1098345/worldwide-ar-vr-investment-use case/#statisticContainer> accessed 10 October 2022

concept of Metaverse. Second, by drawing on the key insights from current economic theory, the paper will explore the different functions through which advertising conveys information to consumers and persuade them to buy products and services. Then the paper will explore the peculiarities of XR-based advertising (due to time limitation, VR and AR advertising will be considered as a unique form of XR advertising), exploring the technical aspects, the representational elements and potential impacts of this new commercial practice on consumers. Third, the paper discusses the current EU legal framework applied to commercial practices and the possible evolution of the current law, due to new challenges in the face of these disruptive technologies, with a focus on Directive 2005/29/CE, the key EU law instrument for safeguarding informed and rational market decisions. Finally, expounding on the conceptual and meta-jurisprudential analysis, the paper will consider an interpretive issue: whether manipulative commercial practices through XR technologies fall under UCPD.

My essay will unfold as follows. Section 1 provides an exhaustive characterization of Virtual Reality, Augmented Reality and Metaverse. In Section 2, I will compare traditional advertising and XR-based advertising, describing the defining features of these new forms of commercial practices that have emerged so far from the empirical evidence and stressing the disruptive effects that XR technologies produce on users. Then, I will tackle on the conceptual distinction between persuasion and manipulation, exploring potential threats and harms for consumers caused by specific manipulation techniques used in XR-based advertising. Section 3 analyses the UCPD Directive focusing on different benchmarks for consumer's protection, namely the average consumer, the target group and the vulnerable group benchmark. Finally, Section 4 integrates the partial findings of the previous sections – as well as the different methods of analysis – into an evolutionary interpretation of XR manipulative commercial practices under the UCPD. The final section draws two main conclusions: first, it suggests that manipulative practices through XR technologies can be regarded as aggressive practices according to Articles 8 and 9 UCPD. Secondly, it paves the way for a new field of research, leaving open the question of whether a stricter "average consumer test" should be required for protecting consumers targeted by XR commercial practices.

2. XR TECHNOLOGIES, USER'S PERCEPTION, AND "THE REALISM OF SIMULATION"

Before proceeding to the analysis of XR advertising, it is essential to illustrate the key features of the two main technologies of the Extended Reality: namely Virtual Reality and Augmented Reality. Identifying and analysing these technologies individually is essential because, often, people confuse the differences between the two that, as we will see, are very different. This Section will present and describe both Virtual and Augmented Reality, by first exploring their defining features and then introducing the concept of Metaverse, a new digital and interactive space based on XR technologies.

2.1 Virtual Reality

When approaching "Virtual Reality" (VR), people may refer to something that has to do with an artificial world, usually generated by a computer software, where various sensory and imaginary experiences are fused and where the users can explore a reality not necessarily related to the physical world. Actually, "virtual reality" is a context-dependent term: its semantic meaning varies drastically across contexts of communications and often depends on the perspective through which it is analysed.

Depending on the technical and cultural background of the speaker, virtual reality can be qualified both as a technology or as an experience. From a strictly technical perspective, typically favoured by engineers, the term virtual reality means "*the use of computer technology to create the effect of an interactive three-dimensional world in which the objects have a sense of spatial presence*[3]".

In this three-dimensional space, also called "Virtual Environment" (VE) [4], the environment can be either a temporally or spatially distant real environment (e.g., a distant space viewed through a video camera), or a non-existent environment, artificially created by a software (e,g,, a virtual animated world in a video game[5]). In the VE, users provide multiple input data to computers (or other devices such as smartphones, tablets, video game consoles) both through traditional input tools like keyboard or mouse, or cutting-edge tools such as wired gloves, VR keyboards, or bodysuits. The virtual environment, after receiving the inputs, returns outputs to the users, in terms of sensory experiences.

Specifically, we can distinguish three categories of virtual reality, depending on the level of 'immersion' perceived by the users of the VE: low immersive, semi-

[3] Steve Bryson, 'Virtual Reality: A Definition History-A Personal Essay' (2013), available online: <arxiv.org/pdf/1312.4322.pdf>

[4] Philipp A. Rauschnabel and others, 'What Is XR? Towards A Framework for Augmented and Virtual Reality' (2022) 133 Computers in Human Behavior.

[5] Jonathan Steuer, 'Defining Virtual Reality: Dimensions Determining Telepresence' (1992) 42 Journal of Communication, 73-93.

immersive, and fully immersive[6]. Low immersive experiences are typically obtained through desktop or laptop screens, which present the virtual environment to the users. However, due to technical limitations of the devices involved, users cannot experience the sense of "really" *being there* (for instance, the simple use of the keyboard or mouse to access to VR would not fully occlude the user's field of view). Semi immersive experiences, instead, allow users to experience virtual environments while remaining connected to their physical surroundings, providing a partial virtual experience. The experience is made possible through three-dimensional graphics, resulting more realistic and immersive than a simple 2D motion picture. By focusing on the digital image, the user obtains the perception of being in a different reality while remaining connected to the physical surroundings. Finally, fully immersive experiences offer the most realistic simulation experience, with 3D vision and immersive sound. To experience and interact with fully immersive virtual reality, the users need suitable VR tools, such as glasses or head-mounted display (HMD), to name only a few. For example, HMDs provide high resolution content with a wide field of view. The display typically splits between the user's eyes, creating a stereoscopic 3D effect, and relies on input tracking systems to establish a truly immersive experience.

From a different perspective, virtual reality can be seen as a *"real or simulated environment in which a perceiver experiences the telepresenc*e". According to this techno-philosophical perspective[7], the key factor of virtual reality lies on the perception of *presence* in the virtual environment. Over the years, cognitive psychologists and behavioural scientists debated about the distinction between *immersion* and *presence*[8]. Immersion refers to what a certain technology "delivers" from an objective point of view: the more a system preserves fidelity in relation to their equivalent real-world sensory modalities, the more it will be "immersive". This is something that can be objectively assessed, based on technical parameters used to describe a system. On the contrary, presence refers to the human response to experiencing environments that such systems deliver. To give an illustration, a colour can be described objectively in terms of a wavelength distribution. However, the

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[6] Sergo Martirosov, Marek Bureš, M. and Tomáš Zítka, 'Cyber sickness in low-immersive, semi-immersive, and fully immersive virtual reality' (2021) 26 Virtual Reality, 15-32.

[7] Technophilosophy is the two-way interaction between technology and philosophy, where philosophy helps to come to grips with new questions about technology, and technology helps to shed light on ancient questions in philosophy. See generally David J. Chalmers, *REALITY+: Virtual Worlds and the Problems of Philosophy* (WW NORTON & Co 2021).

[8] Giuseppe Riva and Francesca Morganti, *Conoscenza, Comunicazione E Tecnologia: Aspetti Cognitivi Della Realtà Virtuale* (LED EDIZIONI UNIVERSITARIE 2006), 38.

perception and emotional response to a colour is an entirely different matter which includes different scientific and cognitive factors such as, for example, the phenomenon of metamerism, where objectively different wavelength distributions are perceived as the same colour by human observers. Accordingly, immersion is analogous to wavelength distribution, and presence is analogous to the perception of colour.

Due to virtual reality systems, users have the perception of being somewhere other than where they are, since VR technology works as a medium between the real world and the virtual environment. In this sense, the mediated perception of an environment is called *telepresence*[9]. In order to deeply understand the effects of a mediated perception of a non-physical environment, we should introduce and describe the two main technological properties of telepresence: *vividness* and *interactivity*[10].

Vividness refers to the ability of a technology to produce a sensorial rich mediated environment. Note that it does not refer to the ability to perfectly replicate real objects, such as the ability to reproduce a virtual car exactly like a real car; it refers to the "sensory richness"; namely the intensity with which a mediated environment is able to present information to the senses[11]. Consequently, since VR is able to address multiple senses and stimuli, such as kinematic and proprioceptive stimuli (i.e., being able to look around and having the sensation of moving and being able to fall), when comparing a VR environment to an environment represented in 2D resolution[12], the former offers a broader experience to the user and the quality of the represented environment is more realistic[13]. Interactivity, instead, refers to the degree to which users can influence the form or content of the mediated environment.

The ability to produce scenarios, experiences and processes that closely resemble real life are what confers authenticity to a virtual experience: the more the virtual environment is perceived as real, the more successful a VR system will be. When the perception of the virtual environment comes close to the perception of the real world, the virtual experience inevitably creates an illusion in the eyes of the user and, at the

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[9] Ibid 166

[10] Jonathan Steuer, 'Defining Virtual Reality: Dimensions Determining Telepresence' (1992) 42 Journal of Communication (n 5) 10.

[11] See generally David R. Fortin and Ruby Roy Dholakia, 'Interactivity and Vividness Effects on Social Presence and Involvement with a Web-Based Advertisement' (2005) 58 (3) Journal of Business Research,387-396.

[12] Giuseppe Riva and Francesca Morganti, *Conoscenza, Comunicazione E Tecnologia* (n 8) 23.

[13] Helena Van Kerrebroeck, Malaika Brengman, and Kim Willems, 'When Brands Come to Life: Experimental Research on the Vividness Effect of Virtual Reality in Transformational Marketing Communications' (2017) 21 Virtual Reality, 177–191.

same time, it provides something that appears vivid and convincing from a sensorial point of view. This paradigm is what philosophers call "the realism of simulation[14]", whereby the simulation is so close to reality that there is no perceived difference between what is real and what is not.

It is worth stressing that a given level of immersion of the VR (and the respective level of presence perceived by a user) cannot be taken as a useful benchmark for assessing the human reaction to a certain virtual environment of the whole category of VR users. Stimuli achieved through VR systems (but even with other technologies that we will further explore in the following) have similar – but not identical – ramifications across an undefined range of perceivers. So, given the same immersive system, different people may exhibit different levels of presence, and also different immersive systems may give rise to the same level of presence in different people. Thus, even in the same virtual environment, the perception of the environment will vary across individuals[15].

2.2 Augmented reality

A second widely implemented technology in the virtual industry is Augmented Reality (AR). One of the earliest definitions of augmented reality was formulated in 1962 by the engineer Ronald Azuma, credited with defining augmented reality and guiding its early developments. His conception of AR can be resumed as the technology which "*allows the user to see the real world, with virtual objects superimposed upon or composited with the real world*[16]".

Running interactively in real time, AR technology blends both virtual and real objects in the same environment[17]. Basically, using special glasses or smartphones (which are much more common today), the users can see the real world as it actually exists, but with digital images superimposed on the world**,** so that they seem to exist as part of the world. Even if AR technology is being known as a technology that "augments" reality, it also includes "diminished reality", where contents, instead of being added to the real environment, are erased[18].

Sometimes, the improper use of VR and AR terms creates confusion amongst the distinction of both of them. As hinted above, the key aspect of VR is *presence*: VR

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[14] David J. Chalmers, *REALITY+: Virtual Worlds and the Problems of Philosophy* (n 3).
[15] Jonathan Steuer, 'Defining Virtual Reality: Dimensions Determining Telepresence' (n 8) 6.
[16] Ronald T. Azuma, 'A Survey of Augmented Reality' (1997) 6 (4) Presence: Teleoperators and Virtual Environments (MIT press), 355–385.
[17] Ibid 2
[18] Philipp A. Rauschnabel and others, 'What Is XR? Towards A Framework For Augmented And Virtual Reality' (n 4), 13.

systems[19] provide a simulated experience that is similar to (or completely different from) the real world, in which both the objects and the environment are virtualized. During this experience, the user has dabbled in an artificial environment and, while immersed, it is difficult for him or her to perceive the actual world *how it really is*.

Whereas augmented reality does not rely on the perception of "being there": the user is not virtually bounced somewhere and does not feel his presence in the virtual surroundings. His perception of the real environment is simply modified: either augmented or diminished. In other words, AR systems supplement reality rather than completely replacing it, allowing users to sense a hybrid experience, which consists in seeing virtual objects superimposed on (or deleted from) the real world[20].

The relationships between AR and VR can vary depending on the actual applications. From a socio-economic perspective, virtual reality can be a competitor of augmented reality: business meetings and social interactions with remote parties could happen either through VR or AR technologies, depending on which technology evolves most quickly or becomes more effective. However, in a different economic scenario, virtual reality can also complement augmented reality; for example when consumers use AR technology to add interactions to the physical-world and VR technology for creating entirely fictional worlds.

2.3 Metaverse

A third technological innovation, which is increasingly spreading over the last months is "Metaverse". The term Metaverse was coined in 1992 by Neal Stephenson, author of the science fiction novel "Snow Crash", to describe a three-dimensional virtual world inhabited by avatars of real people. In October 2021, when Mark Zuckerberg, founder and CEO of Facebook Inc., announced his decision to rebrand the company with the name "Meta Platforms, Inc.", the concept of metaverse has gradually become mainstream in the debate on the future evolution of technology[21].

Metaverse is an advanced technology that allows digital representations of people giving them the possibility to interact with each other, even with the medium of virtual and augmented reality systems, in a variety of settings: at work, in the office, while going to concerts or sports events, or even trying on clothes. Very often Metaverse is referred to as a unique three-dimensional space, but it is possible to create an indefinite

[19] system' refers to a head-worn display connected to a compatible device which is used to generate an image or text.

[20] Ronald T. Azuma, 'A Survey of Augmented Reality' (n 16), 2.

[21] See the official announcement in https://about.fb.com/news/2021/10/facebook-company-is-now-meta/ accessed 10 October 2022.

number of digital spaces and, consequently, *metaverses*. For this reason, Metaverse, rather than a parallel world, should be labelled as a mere three-dimensional space, usually networked, that enhances the perceived immersion with character realness of the avatars**,** where its users can freely interact with each other[22]. Indeed, metaverses or virtual spaces goes beyond sheer entertainment: they aim at the transposition of physical perception of people and objects into a virtual dimension and the creation of digital communities where users can interact and bargain with real money and real (virtual) counterparts[23].

Actually, Metaverse is not entirely new: pioneering forms of deeply social digital spaces already existed in the 2000s, such as the popular game "Habbo Hotel", an online community marked by pixelated avatars and items existing within an arcade-evoking isometric landscape. The platform supporting Habbo Hotel enables users to socialise in virtual hotels, with public rooms accessible to all and private rooms that can be tricked out with customised digital furniture. The interesting fact is that avatars can buy furniture items such as tables, paintings, chairs, and other objects paying through real money, and sell them to other avatars; so, transactions in metaverses already existed well before Zuckerberg's Metaverse. Early social games such as Habbo Hotel paved the way to Metaverse for years but, as history teaches us, the advancement of technology relies heavily on the process of social acceptance through which a new technology is accepted by a community. Advanced forms of metaverse differ from their predecessors because most of them work through blockchain technology, making virtual spaces more functional and interactive due to the possibility for users to handle transactions more quickly and in complete autonomy, without going through any intermediary (e.g. bank circuits)[24].

3. EXTENDED REALITY TECHNOLOGIES IN THE MODERN INTERNAL MARKET

[22] Bingqing Shen and others, 'How to Promote User Purchase in Metaverse? A Systematic Literature Review On Consumer Behavior Research And Virtual Commerce Application Design' (2021), 11.

[23] US analyst Matthew Ball tried to identify the main characteristics of a metaverse to be functional : i) persistent, i.e. continuing indefinitely and without any pause; (ii) running in real time; (iii) no connection limitation; (iv) autonomous and independent economy where users can trade or buy goods and services v) an experience that unites the physical and virtual worlds with no distinction in terms of access or use; vi) total interoperability in terms of data and information entered and exchanged between users; vii) a space with infinite possibilities in terms of experiences to be had and content to be exploited. See Matthew Ball, *The Metaverse: And How It Will Revolutionize Everything* (Liveright Publishing Corporation 2022).

[24] For an exhaustive discussion see Richard L. Pate, 'Legal Issues Inside the Unnatural World of Metaverse' (2022) 43 (5), 188-193

The hidden value of immersive technologies is to eliminate the barrier between content and reality, by transporting the user within the experience or the story. As we will explore, firms are increasingly seeing XR technologies as an invaluable tool for marketing in order to offer to consumer's better experience to the consumers. In particular, the paper focuses on XR advertising, which seems to be the most popular commercial practice used by firms so far. This paper further explores the potential manipulative nature of XR technologies, traditionally understood as a form of unfair commercial practice even in traditional markets, by drawing blurry distinctive lines between persuasion and manipulation. Then, in Section 2.3 the paper investigates whether the current EU legal framework is made outdated or 'obsolete' by the new XR advertising,

with a particular focus on Directive 2005/29/CE on unfair commercial practices - the key EU law instrument for safeguarding informed rational market decisions.

3.1 Traditional advertising and XR advertising

Commercial advertisement has become a part and parcel of modern marketing strategy and is generally regarded as an engine of the free market economy in the era of globalization. Economists attribute to advertising two central and correlative functions: an informative function and a persuasive function[25].

The informative function consists in providing information to consumers about products, services and prices, allowing consumers to make reasoned choices about their purchases. In this regard, we must introduce a central issue in market economy: the asymmetry information between traders and consumers. From an economic perspective, most of the economic models used by economic theorists assumed that individuals, in their choices and actions, maximize their own preferences through utility functions and, conversely, firms maximize profits by selecting best or optimal strategies and actions. To put it differently, economists assume that both individuals and companies are rational; rationality, in turn, is defined in terms of the rational choice theory. The availability of information is essential for evaluating individuals' decisions, given that it shapes the agents' decisions and defines the possibilities they must reach optimal outcomes given their preferences[26]. Information asymmetry constitutes an obstacle in the correct functioning of the market, since incorrectly

[25] Paul C. Santilli, 'The Informative snd Persuasive Functions of Advertising: A Moral Appraisal' (1983) 2 Journal of Business Ethics, 27-33.

[26] Gómez Pomar, Fernando, and Mireia Artigot Golobardes. 'Chapter 4: Rational choice and behavioural approaches to consumer issues'. In *Research Methods in Consumer Law*, (Edward Elgar Publishing 2018), 119-164.

exchanged and perceived information distorts the consumer's ability to make efficient choices, laying the basis for the market decline or failure. In order to prevent market failures, different jurisdictions turn to legal and regulatory interventions, one of which is the requirement to disclose information. In this context, advertising as a source of information, increases the efficiency of the market since, by expanding the amount of information available, consumers have all the information and are able to make efficient choices. This leads to what legal scholars call 'information paradigm', which suggests that when the trader fulfils his obligation to provide information to the consumer, the latter is sufficiently informed and therefore can make rational choices.

In turn, the consumer's ability to rationally locate products gives firms an incentive to compete to improve their offerings, including prices. Without such information, the incentive to compete on price and quality would be weakened, reducing consumer welfare[27] and, consequently, market efficiency would be affected as well.

The persuasive function of advertising is to induce consumers to buy products and services. Advertising is designed to influence consumer purchasing practices, and influential persuasion is often necessary for firms that act under profit-maximization objective. Such commercial practice encourages consumers to, at the very least, consider a particular product or service and they often promote a more general perception regarding a particular product or service.

Recently, some traders are increasingly using data-driven commercial practices to develop more effective artificial solicitations of consumers' attention and, among them, XR advertising. For the purpose of this paper, we can consider XR advertising any form of adverting that takes place in an XR context or is shown on an XR device in real contexts. Despite XR advertising is still infancy compared to other advertising markets technologies, there is a variety of cases in which XR has already been used for advertising and marketing[28].

Based on the current capabilities of XR technologies and the existing case studies, there are two main traits that differentiate XR advertising from traditional forms of

[27] Howard Beales, Richard Craswell and Steven C. Salop, 'The Efficient Regulation of Consumer Information' (1981) 24 (3) The Journal of Law and Economics, 491-539.

[28] For example, the shoe company TOMS created the "TOMS Virtual Giving Trip", a VR project that allowed viewers to follow the TOMS team to Peru through a four-minute virtual reality film, chronicling a visit to a school of children who are about to receive their new shoes. Another fashion company, TopShop, developed the "TopShop VR catwalk experience", in which the fashion show was recorded in real time from a front-row seat and store's visitors, through specially customized glasses, were able to relive the show on demand. Companies such as Ikea preferred to invest more in AR implementations: they developed the "Ikea Place" app, through which the users can experience AR using the camera to place digital furniture around their places.

advertising: first, the higher effectiveness due to defining features of XR technologies and, second, the so-called 'hyper personalization'

1) The higher interactivity and the presence feeling produced by XR technologies and applied to advertising makes XR advertising more effective compared to traditional digital advertising. For instance, XR advertising presents the chance to show and let consumers experience the goods they want to buy before a purchase, enabling consumers to preview more complete and higher quality representations of items (3D-digital recreation instead of a photograph) and interact with the item by picking it up, rotating it, exploring it in detail, rather than just seeing it on a screen.

In addition, the higher quality of ads contents combined to the sense of presence leads to new possible forms of marketing strategies. In traditional digital market, there are many ad techniques that attempt to be subtle, such as the product placement (when a business pays a media company to insert into their media content an own product) or native advertising (ads content intended to blend in with the editorial content). In XR context, XR content are more photorealistic and 'experiential'[29], and may lead the consumer to think that the digital recreation exists in reality. Current AR and VR graphics are not so much photorealistic, but it's most likely that over time the sophistication of devices will lead to more photorealistic graphics, and they might have difficulty discerning if something they see is an ad or if it is part of reality. For instance, if an AR application overlays a digital object such as a sandwich or a beer can on a user's field of vision and the ad the graphics is realistic enough, the consumer may not know if that sandwich or can are real or not.

2) Another essential feature of XR advertising lies in its hyper personalized nature. Targeted-personalized advertising already exists in traditional advertising, especially in digital markets and it occurs when is selectively delivered and targeted to those consumers who are more likely to engage with that ad content[30]. The increasing availability of data and technological advances have enabled online traders to refine a

[29] For example, the shoe company TOMS created the "TOMS Virtual Giving Trip", a VR project that allowed viewers to follow the TOMS team to Peru through a four-minute virtual reality film, chronicling a visit to a school of children who are about to receive their new shoes. Another fashion company, TopShop, developed the "TopShop VR catwalk experience", in which the fashion show was recorded in real time from a front-row seat and store's visitors, through specially customized glasses, were able to relive the show on demand. Companies such as Ikea preferred to invest more in AR implementations: they developed the "Ikea Place" app, through which the users can experience AR using the camera to place digital furniture around their places.

[30] See generally Giuseppe Colangelo and Mariateresa Maggiolino, 'From fragile to smart consumers: Shifting paradigm for the digital era' (2019) 35 (2), Computer Law & Security Review, 171-183 and Johann Laux, Sandra Wachter, Brent Mittelstadt, 'Neutralizing online behavioural advertising: Algorithmic targeting with market power as an unfair commercial practice' (2021) 58 (3), Common Market Law Review, 719-750.

wide variety of practices that rely on the possibility of tracking and profiling consumer behaviours, obtaining valuable insights on which websites consumers like to visit, which products they look for online and with what frequency or means, and insights in relation to socio-demographic data (such as age, gender, financial situation) as well as personal or psychological characteristics (personal interests, preferences, psychological profile, mood). Hyper personalized advertising would be personalized advertising but on a much larger scope and granularity, where ads are not targeted to groups of consumers who share a characteristic (for example, all females who live in Paris), but ads are tailor-made and customized for individuals so that no two people see the same content. For example, a person who really likes dogs might be shown an ad for a product with a virtual fictional dog as a spokesperson for the product. A different person who dislikes dogs and prefers cats would be shown the same advertisement, but with a fictitious cat as a spokesperson for that product.

3.2 Effects of XR on users

Psychologists and cognitive scientists have shown that XR technologies have the potential to affect specific outcomes of consumer of searching for, purchasing, using and disposing of products and services that they expect will satisfy their need[31]by generating changes in the means and processes through which a user understands, acquires knowledge or build abstract structures from experience. For example, research in the tourism industry revealed the potential impact of VR systems in users' behavioural intention to visit destinations showcased as virtual content[32]. Results showed that VR tourism increases the users' tendency to make solid affectional bonds to destinations, people and objects shown in the virtual representation, influencing their intention to visit the destination proposed.

From an economic perspective, consumer's behaviour changes due to XR technologies may contribute to market efficiency. For example, VR and AR ads that let users experience products or services may increase the likelihood of a consumer's attention to the information provided by traders. However, at the same time, the increased immersivity and interactivity of XR can lead the consumer to the so-called 'cognitive absorption' status; i.e. a state of deep involvement with software, that leads individuals to such intense concentration that they ignore everything else[33]. Indeed, giving

[31] Leon G. Schiffman and Joseph Wisenblit, *Consumer Behavior* (Pearson Education Limited 2019).

[32] M Myung J. Kim, Choong-Ki Lee and Timothy Jung, 'Exploring Consumer Behavior in Virtual Reality Tourism Using an Extended Stimulus-Organism-Response Model' (2020) 59 (1) Journal of Travel Research, 69-89.

[33] Ritu Agarwal and Elena Karahanna, 'Time Flies When You're Having Fun: Cognitive Absorption and Beliefs About Information Technology Usage' (2000) 24 (4) MIS Quarterly, 673..

consumers a certain extent of immersion and interactivity, such as the freedom to walk around in an environment or the opportunity to try a garment without physically going to the shop (instead of seeing experiences on a screen), may make consumer emotions more powerful or induce artificial emotions on users that there no existed before, which may make vulnerable a consumer who wasn't or exacerbate vulnerability in consumer who were vulnerable. This vulnerable condition can be exploited by traders to make dangerous products seem playful and fun or alter a consumer's perception of reality, changing what products they want to purchase. In addition, induced vulnerability, combined to the vast data collection capabilities of XR devices and the rise of other advanced technologies such as deep fake system[34], poses the risk that consumers may be targeted when they are emotionally vulnerable or especially susceptible to a certain product. For example, XR ads can simulate individuals who have significant emotional sway over a consumer (such as trusted figure, or a figure the consumer has affection for). The exploitation of such emotions may override a consumer's ability to rationally evaluate the ad and bias consumer's evaluation of the product, interfering with their buying intention when making an economic choice, beside involving new privacy risks for consumers, which may be leveraged for advertising, through which firms could know sensitive information about consumers that renders them susceptible to certain advertisements, such as inferring consumer's emotional state to evaluate when they are emotionally vulnerable[35].

3.3 Persuasion and Manipulation

Despite XR technologies promises to usher in a new era of business-consumer interaction, where the consumer is gradually moving from being a passive consumer to being a real actor in the business-to-consumer interaction, they pose the risk to take the persuasion of consumer choice to a new level. In this regard, it is worth stressing that one of the primary goals of the European Union is to safeguard the interests of consumers and to ensure a high level of consumer protection. Within that scope, the EU legislator must contribute to protecting the health, safety and economic interests of consumers, also promoting the consumers' right to 'information' and 'education'. For this reason, commercial practices that, due to their persuasive nature, profoundly affect

[34] Deepfakes systems are broadly regarded as technologies used to superimpose face images of a target person onto a video of a source person to make a video of the target person doing or saying things the source person does. For example, they that can simulate and make realistic something which is unreal, such as celebrities making statements they haven't made. See Thanh Thi Nguyen and others, 'Deep Learning For Deepfakes Creation And Detection: A Survey' (2022) 223 Computer Vision and Image Understanding, 1.

[35] Natali Helberger and others, 'Choice Architectures in the Digital Economy: Towards a New Understanding of Digital Vulnerability'(2022), Journal of Consumer Policy, 197.

the consumers' ability to choose, are considered illegal under the EU legal frame.

In philosophy, it is a habit to distinguish between the concepts of persuasion and manipulation. Without going into details about the current debates in literature, for the purposes of this paper, we just need to outline that – conceptually – persuasion is a form of influence that, as for manipulation, is aimed to alter beliefs, values, attitudes and actions of others but, unlike manipulation, a certain degree of autonomy in maintained by readers or listeners. That is, a sufficiently independent formation of preferences, and the possibility to critically and rationally review these preferences.

When this autonomy is interfered and the rational choice is impossible or, at least, sufficient impaired, the influence shall be regarded as manipulative[36]. Manipulation is thus regarded to "bypass" the target's rational deliberation[37], where "bypass" means exploiting psychological mechanisms or techniques that can generate behaviour without any input from rational deliberation. From this perspective, manipulation differs from rational persuasion since it influences behaviour by means that do not engage the target's rational capacities[38].

For our purpose, we then consider persuasion as a form of influence, which the target is still rationale and manipulation as a form of influence that significantly impairs rational consumer decision making.

In traditional digital markets, several manipulative techniques were detected, such as the increasingly use of 'Dark Patterns' (practices in digital markets, consisting in online interface or a part thereof that via its structure, function or manner of operation, subverts or impairs the autonomy, decision-making, or choice of recipients of the service)[39], 'Nudges' (which refers to initiatives, inviting people to take certain decisions by playing on their choice architecture without constraining them) or "Sludges" (a means of inducing friction to steer the user away from certain choices or induce deliberation)[40]. A key issue that emerged in literature is the identification of manipulative nature of commercial practices which aim to influence consumers'

[36] Allen W. Wood, 'Coercion, Manipulation, Exploitation', in Christian Coons, and Michael Weber (eds), *Manipulation: Theory and Practice* (Oxford University Press 2014), 17-50.

[37] See generally Robert Noggle, *The Ethics of Manipulation*, (Stanford Encyclopedia of Philosophy 2018).

[38] Allen W. Wood, 'Coercion, Manipulation, Exploitation' (n 38), 35.

[39] See Generally M.R. Leiser and Mireille Caruana, 'Dark Patterns: Light to be found in Europe's Consumer Protection Regime' (2021) 10(6) Journal of European Consumer and Market Law, 237-251.

[40] See generally Stuart Mills, 'Nudge/sludge symmetry: On the relationship between nudge and sludge and the resulting ontological, normative and transparency implications' (2020) Behavioural Public Policy, 1-24.

choices and behaviour. Often these practices operate in a blurred area between legitimate persuasion attempts, which are supposed to inform the consumer and incite them to take a certain decision without radically changing their preferences, and illegitimate manipulation techniques that leverage biases and personal data to influence consumer behaviour.

In December 2021, The European Commission (EC) published the new Notices with guidance on the interpretation and application of the Directive 2005/29/CE (Unfair Commercial Practices Directive) and Directive 2011/83/EU (Consumer Rights Directive), introducing digital manipulation through nudges or manipulative personalization practices as forms of unfair commercial practices[41]. Curiously, the report did not make any reference to XR technologies, virtual environments or these technologies applied to commercial practices, although the EC seems to have started taking into account the issue arguing that 'developments in the area of virtual or blended/augmented reality environments, such as the metaverse, generate additional potential for more immersive dark patterns and manipulative personalisation, which may differ significantly from the classic dark patterns or personalisation techniques used to date, and may have profound implications for consumer decision-making in the digital environment[42]'.

Despite several EU legislative acts address traditional forms of manipulation[43], the EU legal framework does not provide for a proper regulation for manipulation occurred trough XR technologies. This lack of regulation calls for an investigation of the existing consumer protection policies and a profound reflection on whether the existing EU consumer protection policies continues to safeguard autonomous choice in the face of XR manipulation.

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[41] European Commission, Directorate-General for Justice and Consumers, Lupiáñez-Villanueva, F., Boluda, A., Bogliacino, F., et al., Behavioural study on unfair commercial practices in the digital environment : dark patterns and manipulative personalisation : final report, Publications Office of the European Union (2022). Available at https://data.europa.eu/doi/10.2838/859030

[42] Ibid 60.

[43]Directive 2005/29/EC of the European Parliament and of the Council of 11 May 2005 concerning unfair business-to-consumer commercial practices in the internal market and amending Council Directive 84/450/EEC, Directives 97/7/EC, 98/27/EC and 2002/65/EC of the European Parliament and of the Council and Regulation (EC) No 2006/2004 of the European Parliament and of the Council (Unfair Commercial Practices Directive); Directive 2011/83/EU of the European Parliament and of the Council of 25 October 2011 on consumer rights, amending Council Directive 93/13/EEC and Directive 1999/44/EC of the European Parliament and of the Council and repealing Council Directive 85/577/EEC and Directive 97/7/EC of the European Parliament and of the Council (Consumer Rights Directive); Council Directive 93/13/EEC of 5 April 1993 on unfair terms in consumer contract (Unfair Commercial Terms Directive); Regulation (EU) 2016/679 of the European Parliament and of the Council 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, and repealing Directive 95/46/EC (General Data Protection Regulation).

4. LEGAL FRAMEWORK

4.1 Directive 2005/29/CE (Unfair Commercial Practices Directive)

In the EU legislative framework, unfair commercial practices that occur before, during and after a business-to-consumer transaction are mainly addressed by the Directive 2005/29/EC of the European Parliament of the Council of 11 May 2005[44], also called Unfair Commercial Practices Directive (hereinafter, 'UCPD'), recently amended by Directive (EU) 2019/2161[45]. The Directive provides for a maximum level of harmonisation of the rules contained therein establishing a regulatory framework where Member States may not adopt stricter rules than those provided for in the Directive, in order to achieve a higher level of consumer protection[46]. The rationale under the full harmonisation lies in the fact that differentiated regulations among Member States can generate appreciable distortions of competition and obstacles to the smooth functioning of the internal market for two reasons. On the one hand, these disparities cause consumer's uncertainty about their rights, undermining their confidence in the internal market and harming consumers' economic interests. On the other hand, such barriers cause uncertainty about which national rules apply to unfair commercial, which increases the cost for businesses to exercise the freedoms of the internal market, creating many barriers that affect consumers and businesses; in particular when the latter wish to engage in cross-border marketing, advertising campaigns and sales promotions. Hence, full-harmonisation of legislations on unfair commercial practices is essential to prevent market failures.

In order to include the widest number of practices potentially harmful to consumers, the EU legislator adopted a broad definition of 'commercial practice' i.e. 'any act, omission, course of conduct or representation, commercial communication including advertising and marketing, by a trader, directly connected with the promotion, sale or supply of a product to consumers[47]'. The Directive does not address commercial practices carried out primarily for other purposes, including commercial communication aimed to investors (such as annual reports or corporate promotional literature) and business-to-business commercial practices, the latter regulated by the

[44] Directive 2005/29/EC

[45] Directive (EU) 2019/2161 of the European Parliament and of the Council of 27 November 2019 amending Council Directive 93/13/EEC and Directives 98/6/EC, 2005/29/EC and 2011/83/EU of the European Parliament and of the Council as regards the better enforcement and modernisation of Union consumer protection rules. Available at https://data.europa.eu/eli/dir/2019/2161/oj

[46] See Stephen Weatherill and Ulf Bernitz, *The Regulation Of Unfair Commercial Practices Under EC Directive 2005/29* (Hart Publishing 2007), 13.

[47] Art. 2(d) UCPD.VERIFICARE

Directive 2006/114/EC concerning misleading and comparative advertising[48], which seeks to protect traders from other firms.

The UCPD presents a pyramid structure (or, according to another widespread figure, *concentric circles* structure[49]), which includes a general clause of prohibition of unfair practices[50], two general prohibition rules concerning distinct subcategories of practices (respectively, *misleading* and *aggressive*) and a list of practices that are considered unfair in all circumstances (Annex I, also called *blacklist*)[51].

According to Article 5 (2) UCPD, a commercial practice is unfair 1) when it is contrary to the requirements of professional diligence[52] and 2) when it distorts or it is likely to materially distort the economic behaviour of the average consumer. A practice materially distorts the economic behaviour of consumers when it is used to significantly impair the consumer's ability to make an informed decision, thus causing the consumer to take a transactional decision that he/she would not have made otherwise[53]. Legal scholars argued that the twofold test provided in Article 5(2) may seem, at first glance, an extremely broad test[54]. As we discussed in Section 2, one of the first functions of commercial practices (such as advertising) is to influence consumer choice. Practices deliberately aimed to influence and persuade consumer behaviour are not illegal *per* se, since it would be against the widely shared normative intuition to even consider prohibiting many practices that are known to influence choice (such as cleverly designing the way in which options are displayed in a store or on a menu). Therefore, in order to prevent an excessive extension of the prohibition of persuasive commercial practices, a reasonable interpretation of the 'material distortion' of consumer choice – based on the findings of the empirical evidence[55] – is required.

UCPD distinguishes two categories of unfair commercial practice: 1) misleading practices (by action and by omission); 2) aggressive commercial practices. Under the

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[48] Directive 2006/114/EC of the European Parliament and of the Council of 12 December 2006 concerning misleading and comparative advertising. Available at https://<data.europa.eu/eli/dir/2006/114/oj>

[49] Mario Libertini, 'Clausola generale e disposizioni particolari nella disciplina delle pratiche commerciali scorrette' (2009) 1 Contratto e Impresa, 94.

[50] Art. 5, para 1UCPD.

[51] Annex I UCPD.

[52] According to Art. 2 (h) UCPD professional diligence is 'the normal degree of the specific skill and care which consumers reasonably expect from a trader with respect to them with respect to the general principles of fairness and good faith in the trader's field of activity'.

[53] Article 2(e) UCPD.

[54] Anne-Lise Sibony, 'Can EU Consumer Law Benefit from Behavioural Insights? An Analysis of the Unfair Practices Directive' (2014) 6 European Journal of Private Law, 908.

[55] Ibid 909.

UCPD, a commercial practice will be regarded as a misleading action if it contains false information or gives an overall impression that deceives, or is likely to deceive, the average consumer (even if the information is factually correct). False information must relate to certain matters set out in Art. 6(2) UCDP which includes product's essential element such as the price and quality of goods or services. According to Article 7, practice is also misleading if the material information needed to take an informed purchasing decision is omitted or provided in an unclear, unintelligible, ambiguous or untimely manner. The rationale under article 7 is based on the aforementioned information paradigm, according to which the increasing amount of information and establishing full transparency help consumers to make rational choices. As a result, UCPD provides a general list of information that should be regarded as material, such as the price and main characteristics of the product, - also complemented by other Directives such as Consumer Rights Directive, which imposes further information requirements (for example, for distance and off-premises contracts).

According to Article 8(1), a practice is aggressive if, as a result of harassment, coercion or undue influence occurred at the marketing stage - but also during or after a transaction has taken place - it significantly impairs the average consumer's freedom of choice and causes them to take a purchasing decision they would not have taken otherwise. As clarified by the Court of Justice (CJEU) [56], Article 8 must be interpreted taking into account certain factors (specifically listed in Article 9) when determining whether an unfair aggressive practice has occurred.

Finally, the commercial practices included in Annex I of UCPD are those that shall be – in any case – regarded as unfair and shall be punished without having to apply a case-by-case test. This list has been drawn up to enable enforcers, traders and consumers to identify certain practices and give them a more immediate enforcement response, leading to greater legal certainty.

The average consumer

UCPD leaves Member States the right to choose the appropriate authorities (courts or administrative authorities) to whom enforcement powers are granted (ordering the cessation of unfair commercial practices, taking appropriate legal proceedings against them, etc.). For example, in Italy, AGCM has wide latitude to take action against practices that it deems misleading or deceptive. When a court or an administrative

[56] Case C-628/17, Prezes Urzedu Ochrony Konkurencji i Konsumentów v. Orange Polska S.A., EU:C:2019:480 (also known as 'Polska').

authority is required to assess the fairness of a commercial practice, it needs to determine which benchmark for consumers should be applied.

According to Article 5(2) UCPD, commercial practices must be assessed from the perspective of the 'average consumer', who is a person 'reasonably well informed and reasonably observant and circumspect[57]'. This concept was developed by the CJEU prior to the UCPD and its origins can be traced in the free movements of goods case law. The notion of the average consumer has been used by the CJEU to tackle over-protective national laws related to unfair commercial practices and, in particular, against Germany, where it was common practice to assess commercial practices from the point of view of a superficially observing and generally uncritical consumer[58]. In *Gut Springenheide*[59], the CJEU ruled that when assessing the legality of a commercial practice, national court must take into account the presumed expectations of a consumer which is assumed to be 'reasonably well informed and reasonably observant and circumspect. However, CJEU also stressed that the average consumer test is not a statistical test: this means that national authorities and courts should be able to use, if necessary, empirical evidence to determine whether a practice is liable to mislead the average consumer. In later cases, the CJEU emphasised that social, cultural and linguistic factors can be taken into account in the application of the average consumer benchmark[60].

Since its adoption, the average consumer benchmark has raised criticism in academic literature. The prevailing assumption in consumer law is that consumers act rationally when they have the necessary information[61]but – as it has been observed by the critical doctrine[62] – empirical evidence has shown that individual consumers may not always be at all observant and circumspect, or may not be so in a particular situation. They argue that the purely normative approach adopted at EU level seems to fail to consider behavioural insights of the consumer-decision making process, which is mistakenly considered to be always reasonably circumspect and attentive[63]. According to this

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[57] Recital 18 of the Preamble to the Directive.

[58] See generally Bram B. Duivenvoorde, *The Consumer Benchmarks in the Unfair Commercial Practices Directive* (Springer 2015) and Vanessa Mak, 'Standards of Protection: In Search of the 'Average Consumer' of EU Law in the Proposal for a Consumer Rights Directive' (2011) 19 (1), European Review of Private Law, 25-42.

[59] Case C-210/96, Gut Springheide GmbH v. Oberkreisdirektor des Kreises Steinfurt. ECLI:EU:C: 1998:369.

[60] Case C-220/98, Estee Lauder Cosmetics GmbH & Co. OHG v. Lancaster Group GmbH, ECLI:EU:C:2000:8, para 28.

[61] Case C-470/93 Mars ECLI:EU:C:1995:224

[62] Geraint Howells, Hans-W. Micklitz and Thomas Wilhelmsson, '*European Fair Trading Law*' (Routledge 2006); Rossella Incardona.

[63] Cristina Poncibò,'The Average Consumer, the Unfair Commercial Practices Directive, and the Cognitive

standpoint, the expected awareness of the average consumer is unrealistically high because consumers do not always have the time and resources at their disposal to acquire and process sufficient information for rational decision-making. Even well-informed consumers of a high intellectual and educational level, who would be – at least in theory – ideally suited for rational market behaviour, may often base their decisions on custom and feelings rather than on an analytical process.

Recently, the CJEU has shown an increasing openness to receive behavioural insights on the interpretation of the average consumer. In *Teekanne* judgement[64], concerning the interpretation of the Directive 2000/13 on labelling, presentation and advertising of foodstuffs, the Court was asked to rule on whether a consumer could be misled by the labelling about the ingredients in a product, despite the fact that the list of ingredients was accurate. The CJEU ruled that 'the list of ingredients, even though correct and comprehensive, may in some situations not be capable of correcting sufficiently the consumer's erroneous or misleading impression concerning the characteristics of a foodstuff that stems from the other items comprising its labelling[65]', acknowledging that the average consumer may be prone to ignore, or misunderstand, important product information; thus providing a necessary 'update' to the concept of average consumer in older jurisprudence.

4.2 The Target Group and Vulnerable Consumer Group Benchmarks

Besides the general "average consumer" test, the UCPD provides for two further benchmarks: the 'target group' and the 'vulnerable consumer' benchmark, respectively. As follow from the text of Art. 5(2) UCPD, when commercial practices are aimed at certain groups of consumers (who, for example, are less than averagely informed, observant or circumspect), the average member of that group is the benchmark. Legal scholars argue that the demarcation between the average consumer benchmark and the target group benchmark is not clear, since even the average consumer is determined on the basis of who is reached by the practice or to whom the practice is directed[66]. In this regard, the EC Guidance for the interpretation of UCPD clarified that in order to isolate a 'particular group of consumers', the group should be sufficiently identifiable, limited in scope and homogeneous. For instance, this could be the case when a commercial practice concerns the promotion of a specific product,

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Revolution' (2007), 30 (1), Journal of Consumer Policy Issue, 21-38.

[64] Case C-195/14, Teekanne, ECLI:EU:C:2015:361

[65] Case C-195/14, Teekanne, ECLI:EU:C:2015:361

[66] Bram B. Duivenvoorde, *The Consumer Benchmarks in the Unfair Commercial Practices Directive* (Springer 2015) (n.61), 23.

through marketing channels specifically addressed to a limited group of recipients, such as a particular profession. In this case, the average member of that particular group may have more specific knowledge or characteristics that an average consumer would not necessarily have. If a particular group cannot be identified, then the assessment should focus on the general average consumer benchmark.

Art. 5(3) UCPD provides for the notion of the vulnerable group of consumers, i.e. 'a clearly identifiable group of consumers who are particularly vulnerable to the practice or the underlying product because of their mental or physical infirmity, age or credulity'. The recognition of such vulnerable consumers is based on the idea that they should be ensured a higher level of protection than 'the average consumer' referred to in Article 5(2), by virtue of their particular conditions which make them most in need of protection. Consequently, when commercial practices are addressed to a vulnerable group, the unfairness of the practice shall be assessed from the perspective of the average member of that group, provided that this vulnerability is foreseeable by the trader.

Part of consumer law literature strongly criticizes this approach of identifying particular groups of vulnerable users as unnecessarily stigmatizing and far away from social reality. They argue that vulnerability should not be considered as a distinctive character of particular weaker individuals and groups, based on specific situations or socio-economic contexts[67], but rather suggest a reformulation of the understanding of vulnerability as a universal human condition to which anyone may be exposed at any given moment and subject to changes due to different periods and also in spaces[68]. According to this universal understanding of vulnerability, vulnerable consumers would not be the exception but the rule and this is essentially the opposite approach adopted by the UCPD.

5. AN EXERCISE IN LEGAL FUTUROLOGY

Before presenting our further discussion, it should be stressed that the application of the UCPD rules to XR commercial practices remains mostly untested by national courts and the CJEU. Thus, further argumentation as to how the Directive's concepts apply to this relatively new practice are purely speculative.

What has been discussed in the previous sections shows that there is little doubt that

[67] Gianclaudio Malgieri and Jedrzej Niklas 'Vulnerable Data Subjects' (2020) 37 Computer Law and Security Review, 3.

[68] Martha A. Fineman, *Equality, Autonomy, and the Vulnerable Subject in Law and Politics Fineman*, (Routledge 2016), 17.

the intrinsic characteristics of XR technologies may be fertile ground for undermine consumer's autonomy and interfering with their freedom of consumer choice. These concerns require a thorough investigation on whether the existing EU legal framework continues to meet these challenges or these risks may prompt future legislative and regulatory action. In this section, we will do a futurology exercise, trying to investigate whether the Unfair Commercial Practices Directive is sufficient to safeguard autonomous choice in the face of manipulation techniques in advertising due to XR technologies and what provisions of UCPD should address this form of manipulation.

5.1 Manipulative XR commercial practices under UCPD

The importance of information for the functioning of efficient markets has been broadly discussed in the previous sections. Information about price, quality and other attributes allows buyers to make the most of their budget by finding the product whose mix of price and quality they prefer. This principle is one of the pillars of EU consumer law, set out in Article 169 of the Treaty on the Functioning of the European Union (TFEU), which expressly safeguards 'the health, safety and economic interests of consumers ', as well as 'their right to information, education and to organise themselves in order to safeguard their interests'.

However, the availability of information is a necessary but not a sufficient condition to ensure that individuals act properly on it when making decisions, since individuals do not equally understand and evaluate the information available to them and all the various circumstances and formats in which the information may come or be accessible to them. More recent behavioural analyses when evaluating individuals' decisions have shown evidence of cognitive limitations and biases revealed by humans when making decisions. Such limitations and biases may result in different evaluations of the information available by different agents, but also incorrect of harmful – for the agents themselves – assessments, which do not seem to correspond to the predictions of rational choice.

In the context of XR, cognitive responses to virtual or augmented reality contents raise concerns on the rational acting of consumer. XR technologies can create artificial experiences for people to live through. Even though the experiences may be artificial, the feelings and emotions they generate in users are real. If the feelings are positive and particularly powerful, they may affect the consumer's evaluation of the product. In this scenario, the eventual disclosure of information about the manipulative influence produced by a certain content shown through a virtual or augmented reality system (XR advertising or other commercial practice involving XR technologies) by

the trader does not exclude manipulation from the impairment of the rational choice: actually, it may lead to a paradox. Traders, by providing more information about the peculiar nature of the XR technologies applied to the specific practice, fulfil their obligations to disclose information and can always deflect the charge of misleading consumers. On the other hand, the disclosure of information does not prevent the risk of impaired choice for consumers. Accordingly, regarding manipulative XR commercial practices – as misleading under the scope of Article 6 UCPD – could be ineffective. Instead, I suggest another perspective; namely that the enforcement activities in the UCPD context should focus on aggression and, in particular, on aggression as 'undue influence' according to Articles 8 and 9 UCPD.

Article 8 provides that a commercial practice is aggressive when it significantly impairs - or it is likely to significantly impair - the average consumer's freedom of choice or conduct 'by harassment, coercion, including the use of physical force, or undue influence'. Article 2 (J) further clarifies the interpretation of 'undue influence', which must be regarded as the exploitation of a 'position of power in relation to the consumer so as to apply pressure, even without using or threatening to use physical force, in a way which significantly limits the consumer's ability to make an informed decision'.

In Polska judgment[69], the CJEU examined whether the practice in question (in this case, the conclusion of a contract where the consumer had to make the final decision in the presence of the courier employee) should be considered an aggressive practice with the use of undue influence, according to art. 8 and 9 UCPD. On the facts, it was held that constitutes an aggressive commercial practice through the exertion of undue influence where the trader adopts unfair conduct, the effect of which is 'to put pressure on the consumer such that his freedom of choice is significantly impaired, such as conduct that makes that consumer feel uncomfortable or confuses his thinking concerning the transactional decision to be taken[70]'. The key point for our purposes is that the CJEU recognised that a practice shall be regarded as aggressive when the consumer 'feel uncomfortable and thus to confuse his thinking in relation to the transactional decision to be taken'. This case is obviously significant for the purpose of the recognition of illicit nature of XR manipulative practice: it suggests that the use of XR technologies that lead to the targeting of cognitive bias or emotional weakness should be considered an undue influence if the effect is so significant as to confuse the

[69] C-628/17, Orange Polska (n 58).
[70] C-628/17, Orange Polska, para 50.

consumer. From this perspective, even in case the traders fulfil their obligation to disclosure information to the consumer, the manipulation should be regarded as aggressive under Articles 8 and 9 UCPD. However, such an interpretation of the decision faces certain objections (that due to time limitation I will not discuss here) in case the traders are not deliberative trying to manipulate the consumer, but they are just trying to persuade him/her. According to Article 9(c) UCPD, a situation-specific impairment of the consumer's decision-making capacities must be taken into account if the trader is "aware", and not "should have been aware". In commercial practises, the boundary line between persuasion and manipulation sometimes can be so thin that it is difficult to identify the manipulative nature of such practices. Thus, problems arise in all those cases in which a commercial practice is not intentionally directed to put the consumer under pressure in order to make a choice[71].

5.2 CONCLUSIONS

As we have seen in this paper, the effective harms for consumers due to XR advertising (and XR commercial practices in general) are currently mainly theoretical in nature and remain more related to a hypothetical future scenario than to real market contexts. This is due to the fact that XR technologies are still in the early stages: the success of many new technologies and technology-based applications strongly depends on several manufacturers and the process of social acceptance, determined by both efficiency and perceived usefulness. Currently, XR devices have not yet reached mainstream usage, in part due to the cost and bulkiness of the devices. Although forms of XR commercial practices, such as advertising and experiential marketing exist, they have not yet entered the mainstream consciousness or are not part of major advertising strategies.

However, we also considered that any future forms of manipulation, analysed on the basis of the current potential of XR technologies (thus without considering future developments in the field) could be configured as forms of 'undue influence' and fall within the scope of aggressive commercial practices under Articles 8 and 9 UCPD, albeit with some doubt when the intention of the trader is not deliberately directed to manipulate the consumer.

Nonetheless, this paper opens up a new field of debate in the legal literature. It's most likely that future advances in XR advertising may introduce new forms of personalized

[71] For an excellent discussion on manipulation as aggressive commercial practice, see Philipp Hacker, 'Manipulation by algorithms. Exploring the triangle of unfair commercial practice, data protection, and privacy law' (2021), European Law Journal, 1– 34

persuasion strategies that discover – and build on – individual biases, weaknesses, preferences and needs of consumers, and they can be deliberately aimed at making consumers vulnerable, in the sense of affecting their ability to rationally deal with a particular commercial practice[72]. By drawing on key insights from current theories, this paper questions whether such exploitation of consumer weakness and vulnerabilities is substantially changing the reference actor from the average to the vulnerable consumer[73]. In that case, the recent behavioural insights by the CJEU – such as Teekanne judgment – could be seen as a first step to understand the "average consumer" in a less normative way, paving the way for discussions about the likely behaviour of real consumers.

[72] See generally Natali Helberger and others, 'Choice Architectures in the Digital Economy: Towards a New Understanding of Digital Vulnerability' (2021) 45 (2) Journal of Consumer Policy, 175-200.
[73] Ryan Calo, 'Digital market manipulation' (2013) 82(4) George Washington Law Review,1033.