

Taming Digital Influence: Hypernudging and the Role for European Competition Law

Viktorija Morozovaitė

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Taming Digital Influence: Hypernudging and the Role for European Competition Law

Het Temmen van Digitale Beïnvloeding: Hypernudging en de Rol van het Europese Mededingingsrecht

(met een samenvatting in het Nederlands)

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List of Abbreviations

AEC	As-Efficient-Competitor
AI	Artificial Intelligence
AI Act	Artificial Intelligence Act
API	Application Programming Interface
CDO	Creative Dynamic Optimisation
The Commission	European Commission
The Court	European Union Court
DSA	Digital Services Act
DSP	Demand Side Platform
EC	European Community
ECJ	European Court of Justice
eDP	ePrivacy Directive
EDPB	European Data Protection Board
ERC	European Research Council
EU	European Union
FBA	Fulfilment by Amazon
GDN	Google Display Network
GDPR	General Data Protection Regulation
GSN	Google Supply Network
GSP	Generalised Second Price
HCI	Human-Computer Interaction
IoT	Internet of Things
IS	Information Systems
ML	Machine Learning
OECD	Organisation for Economic Co-operation and Development
OS	Operating System
PPC	Pay-Per-Click
ROI	Return On Investment
SSNDQ	Small but Significant Non-Transitory Decrease in Quality
SSNIP	Small but Significant Non-Transitory Increase in Price
SSP	Supply Side Platform
TEU	Treaty on European Union
TFEU	Treaty on the Functioning of the European Union
The Union	European Union
UCPD	Unfair Commercial Practices Directive
UI	User Interface
US	United States of America
UX	User Experience
VA	Voice Assistant
VLOP	Very Large Online Platform
VLOSE	Very Large Online Search Engine

Table of Contents

<i>List of Abbreviations</i>	5
<i>Acknowledgments</i>	9
<i>Acknowledgments of Co-authored Articles</i>	10
<i>Chapter 1 Introduction</i>	13
1. Introduction	14
2. A Primer on Hypernudging Processes	15
2.1. User Influencing and the Evolving Transdisciplinary Debate	17
2.2. Situating Hypernudging within User Influencing Discourse	18
2.3. Hypernudging by Big Technology Companies: Exploring Multifaceted Harms	22
3. Legal Background	28
3.1. Overview of European Competition Law	29
3.2. The Interface between Competition Law and Regulation	32
3.3. Regulatory Developments during the Research Period	35
4. Research Question and Methodology	36
4.1. Methodology	36
4.2. Contribution to the Literature	42
5. The Structure of the Dissertation	44
<i>Chapter 2 Hypernudging in the Changing European Regulatory Landscape for Digital Markets</i>	49
1. Introduction	51
2. From Nudging Citizens to Hypernudging Users	53
2.1. Introduction to the Nudge	54
2.2. Digital Nudging	56
2.3. Hypernudging Framework	58
3. Hypernudging as a Policymaker’s Problem: “Unknown (Un)knowns”	63
3.1. Dark Turn of Digital Nudging	63
3.2. Hypernudging Replicates and Elevates Existing Policy Challenges	66
4. Hypernudging in the European Digital Policy Agenda: Present and Future	68
4.1. The Shift of European Policymaking for Digital Markets	69
4.2. Towards a Future-Proof Digital Policy	73
5. Conclusion	76
<i>Chapter 3 Normative Underpinnings of European Competition Law</i>	79
1. Introduction	80
2. Internal Framing of European Competition Law	81

2.1. The Formative Period: Legal-Historical Background	82
2.2. The Modernisation Period: More Economic Approach	85
2.3. The Contemporary Period: Digitalisation of Markets	88
3. External Framing of European Competition Law	93
3.1. Economic Freedom within the European Economic Constitution	94
3.2. Digital Transition and the Emergent European Digital Constitutionalism	102
4. Normative Framework	107
4.1. Autonomy	109
4.2. Equality	111
5. Conclusion	114
<i>Chapter 4 Two Sides of the Digital Advertising Coin: Putting Hypernudging into Perspective</i>	<i>113</i>
1. Introduction	119
2. Google's role in the digital advertising ecosystem	120
2.1. Google's Ad Tech Stack	120
2.2. Types of Digital Advertising	123
3. Digital Advertising as a Form of Hypernudging	126
3.1. Introduction to Hypernudging	127
3.2. Leading Consumers With(in) Google Maps App	129
3.3. Integrated Advertising Campaigns	136
4. Hypernudging within digital advertising markets: Consumer harm?	138
4.1. Intermediation bias and systemic market manipulation	139
4.2. Individual Perception Control and Limitation of Choice	141
5. Conclusion	144
<i>Chapter 5 The Future of Anticompetitive Self-preferencing: Analysis of Hypernudging by Voice Assistants under Article 102 TFEU</i>	<i>147</i>
1. Introduction	149
2. The Rise of Market Power in the Voice Intelligence Industry	151
2.1. The Market for General Purpose Voice Assistants	151
2.2. Addressing Market Power in Digital Markets: from Article 102 TFEU to Sector-Specific Regulation	155
3. Hypernudging by Voice Assistants as a Threat to Competitive Markets	162
3.1. The Mechanics of Hypernudging by Voice Assistants	162
3.2. Hypernudging Effects on Competitive Digital Markets	166
4. Anticompetitive Self-preferencing Analysis of Hypernudging by Voice Assistants	173
4.1. Self-preferencing under Article 102 TFEU	173
4.2. A Turning Point: Google Shopping	175
4.3. Voice-based Services vis-à-vis the Future of Self-preferencing	179
5. Conclusion	182

<i>Chapter 6 Exploring the Nexus between European Competition Law and Democratic Society: A Case of Political Microtargeting</i>	185
1. Introduction	187
2. Political Microtargeting and Big Technology Companies	189
2.1. The Rise of Political Microtargeting	190
2.2. The Role of Big Technology Companies in Political Microtargeting	196
2.3. The Power of Big Technology Companies	201
3. European Competition Law and the Impact of Political Microtargeting on Democracy	204
3.1. European Competition Law in an Open and Democratic Society	204
3.2. Citizen Values in the EU: Freedom, Autonomy and Equality	210
3.3. Political Microtargeting and its Impact on Citizen Values	214
4. European Competition Law and Political Microtargeting: Revisiting the Fundamentals	217
4.1. Political Microtargeting: A Multifaceted Legal Response to a Multifaceted Phenomenon	218
4.2. Applying Abuse of Dominance Prohibition to Political Microtargeting	220
4.3. Reconfiguring the Boundaries of European Competition Law?	225
5. Conclusion	229
 <i>Chapter 7 Conclusion</i>	 233
1. Introduction	234
2. Teasing Out the Spectrum of Influence	235
2.1. The Challenge of Conceptual Inconsistency	236
2.2. The Reflection on the Concept of “Hypernudging”	237
2.3. The Challenge of Problematising the Hypernudging Phenomenon	238
3. Hypernudging as Abuse of Dominance	240
3.1. Exclusionary Abuse	242
3.2. Exploitative Abuse	245
3.3. The Nexus between Competition and Democracy: Political Hypernudging	248
4. Hypernudging in the EU’s Digital Policy Agenda	250
4.1. Increasing Transparency of Opaque Algorithmic Systems	252
4.2. Fundamental Rights and Public Values	255
5. Concluding remarks	256
 <i>Annex I</i>	 261
<i>Bibliography</i>	267
<i>Summary</i>	319
<i>Samenvatting</i>	325
<i>About the author</i>	331

Acknowledgments of Co-authored Articles

This dissertation is an articles-based dissertation, which is a result of individual work for which I bear sole responsibility, with the exception of chapter 6:

Viktorija Morozovaite and Anna Gerbrandy, 'Exploring the nexus between European competition law and democratic society: a case of political microtargeting' (2023, pending decision in an international peer-reviewed journal)

Chapter 6 is co-authored with Anna Gerbrandy and is a result of a three-year collaboration, which started with a call for papers at the STS Graz Conference 2020 and, due to the COVID-19 pandemic, was delayed to 2021, where we presented our initial findings. However, the chapter was always intended to be part of this dissertation, as reflected in its connection to chapter 3, which outlines the normative framework and its contribution to answering the overarching research question. The chapter is a result of a collaborative effort in terms of conceptualisation of the problem, structuring the argument and critical revisions of the article. I took the lead on the initial research phase and wrote the original draft manuscript. Together with Anna Gerbrandy, we are co-first authors who contributed equally.

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Chapter 1

Introduction

1. Introduction

The phenomenon of influence is an unavoidable part of everyday life. As young children, we learn how to behave to get what we want; as spouses, colleagues, friends, and parents, we influence others and, to some degree, expect to be influenced. In colloquial language, “influence” refers to the ability to affect others’ development, thoughts or behaviour without necessarily having control over them.¹ It does not have to be coercive, aggressive, or even covert; it may be as subtle as expressing a positive emotion, such as enthusiasm.

This research is concerned with defining and examining a specific form of influencing that takes place in digital environments - “hypernudging”, which in simplified terms refers to highly dynamically personalised user steering. Taking insights from behavioural economics and their practical implementation in the nudge theory as a starting point, it examines how the nudging *mechanism*² can be implemented in digital environments and what response its multifaceted and diffuse effects evoke from European competition law, as well as the broader EU’s digital policy perspective. Its **main research question** is:

What is the role that European competition law ought to play in addressing the challenges of hypernudging by big technology companies?

Hypernudging is positioned in the context of the *power of big technology companies* and their prominent role in shaping digital markets. This deliberate choice stems from the fact that the research is embedded in the European Research Council (ERC) Starting Grant (No. 852005) project “Modern Bigness”, which develops a novel taxonomy of power related to the digital conglomerates and assesses whether *European competition law* can and should tackle the manifold challenges that arise from this power, reaching beyond the market domain. The comprehensive account of the theory of Modern Bigness is laid down in Gerbrandy and Phoa’s chapter *The Power of Big Corporations as Modern Bigness and a Vocabulary for Shaping Competition Law as Counter-Power* and is echoed in the different chapters of this dissertation.³ Against this background, hypernudging represents one of the instances of the power of big technology companies.

¹ ‘Oxford Learner’s Dictionary’ <<https://www.oxfordlearnersdictionaries.com/definition/academic/influence>> accessed 23 August 2023.

² Cass R Sunstein and Richard H Thaler, *Nudge: Improving decisions about health, wealth, and happiness* (2nd edn, Penguin Books 2009).

³ Anna Gerbrandy and Pauline Phoa, ‘The Power of Big Tech Corporations as Modern Bigness and a Vocabulary for Shaping Competition Law as Counter’ in Rutger Claassen, Michael Bennett and Huub Brouwer (eds) *Wealth and Power: Philosophical Perspectives* (Routledge 2022).

The research for this dissertation was conducted between 1 May 2019 and 1 April 2023. The timing has implications for how the research was set up and progressed over time as my thinking about the subject evolved alongside the fast-paced developments in academic discourse and EU digital policy.

This introduction establishes the necessary context to situate the contributions of this dissertation within a cohesive narrative. It begins by providing a primer on hypernudging as part of the broader user influencing debate and identifying its potential harms (section 2). After setting out the problem definition, it positions the topic in the context of European competition law and the broader EU digital policy (section 3), ultimately delineating the scope of the academic inquiry, its aims, methodology and contribution to the literature (section 4).

2. A Primer on Hypernudging Processes

People's decision-making increasingly takes place online.⁴ For instance, smartphones are an inseparable part of modern life.⁵ Instead of relying on a salesperson's recommendations for a purchase, asking directions from a stranger in an unfamiliar city or visiting a library to find an answer to a bugging question, people can now access all sorts of information at their fingertips or a voice command, without having to exert much physical or cognitive effort. The developments in the field of generative artificial intelligence (AI), such as ChatGPT, further exemplify the growing trust in technology to help direct and even substitute parts of human decision-making.⁶

⁴ For instance, on the global average, in 2023 people reach 6 hours 58 minutes of screen time per day. Gen Z's around 9 hours. This excludes other digital interfaces, such as voice user interfaces, that allow for non-visual modes of engagement, see: See: Josh Howarth, 'Alarming Average Screen Time Statistics (2023)' (*Exploding Topics*, 13 January 2023) <<https://explodingtopics.com/blog/screen-time-stats>> accessed 1 June 2023.

⁵ In 2021, 86% of EU citizens were unique mobile subscribers, with 80% using smartphones. See: GSMA, *The Mobile Economy in Europe 2022* (*GSM Association*, 2022) <<https://www.gsma.com/mobileeconomy/wp-content/uploads/2022/10/051022-Mobile-Economy-Europe-2022.pdf>> accessed 1 June 2023.

⁶ Kyle Wiggers and Alyssa Stringer, 'ChatGPT: Everything you need to know about the AI-powered chatbot' (*TechCrunch*, 31 May 2023) <<https://techcrunch.com/2023/05/31/chatgpt-everything-you-need-to-know-about-the-open-ai-powered-chatbot/>> accessed 1 June 2023. Ferrari, van Dijck and van den Bosch further argue that AI applications powered by large language models (LLMs) may have a transformative effect on the production of knowledge. See: Fabian Ferrari, José van Dijck and Antal van den Bosch, 'Foundation models and the privatization of public knowledge' (2023) *Nature Machine Intelligence* 1.

However, there is no such thing as a neutral design.⁷ The structuring and presentation of users' digital choice environments, also referred to as "choice architectures", have a direct sway on their decisions.⁸ This observation is based on behavioural evidence, which boils down to an insight that people's decision-making is influenced by environmental and cognitive constraints.⁹ Thus, by altering choice architectures, it is possible to steer people's behaviour towards pre-determined outcomes.¹⁰ Increasingly, the function of organising digital environments is performed by automated algorithmic systems that operate as "black boxes" with limited human oversight.¹¹

The above is important because digital environments are, to a large extent, man-made corporate infrastructures that are purposely designed to favour digital platforms' commercial incentives.¹² Firms not only have the ability but also the financial incentives to design their digital interfaces in a way that would steer users' decisions for their benefit.¹³ Leveraging insights from neuroscience, cognitive psychology and social psychology has become the norm in designing users' experiences online.¹⁴ User influencing practices form an integral part of digital platforms' business models, with the goal to nudge users to spend more time, attention, and money on their products and services.¹⁵ Nevertheless, when the interests of the digital platform and the user are mismatched, there is a risk of harmful effects.¹⁶

The research for this dissertation was started in May 2019. The topic of "hypernudging" and practices that adopt behavioural mechanisms online (e.g., dark patterns) were

⁷ Sunstein and Thaler (n 2); Will Leggett, 'The politics of behaviour change: nudge, neoliberalism and the state' (2014) 41(1) *Policy and Politics* 3; On Amir and Orly Lobel, 'Stumble, Predict and Nudge: How Behavioural Economics Inform Law and Policy' (2008) 108(8) *Columbia Law Review* 2098.

⁸ Robert Munscher, Max Vetter and Thomas Scheuerle, 'A review and taxonomy of choice architecture techniques' (2015) 29(5) *Journal of Behavioral Decision-Making* 511, 511.

⁹ Among others: Herbert A Simon, 'Administrative decision making' (1965) *Public Administration Review* 31; Matthias Klaes, Esther-Mirjam Sent, 'A conceptual history of the emergence of bounded rationality' (2005) 37(1) *History of political economy* 27; Amos Tversky and Daniel Kahneman, 'Judgement under Uncertainty: Heuristics and Biases' (1974) 185 *Science* 1124.

¹⁰ Richard H Thaler, Cass R Sunstein and John P Balz, 'Choice architecture' in Eldar Shafir (ed) *The behavioral foundations of public policy* (Princeton University Press 2010).

¹¹ Stuart Mills and Henrik Skaug Saetra, 'The autonomous choice architect' (2022) *AI & Society* 1. On the concept of "choice architect", see: Thaler, Sunstein and Balz (n 10), 428; Frank Pasquale, *The black box society: the secret algorithms that control money and information* (Harvard University Press 2015).

¹² Taylor Owen, 'Introduction: Why Platform Governance?' (CIGI, 28 October 2019) <<https://www.cigionline.org/articles/introduction-why-platform-governance/>> accessed 23 August 2023.

¹³ George Akerlof and Robert J Shiller, *Phishing for phools: the economics of manipulation and deception* (Princeton University Press 2015).

¹⁴ Darren Bridger, *Neurodesign: Neuromarketing insights to boost engagement and profitability* (Kogan Page Publishers, 2017); Selena Nemorin, *Biosurveillance in New Media Marketing: World, discourse, representation* (Palgrave Macmillan, 2018), chapter 3.

¹⁵ Tim Wu, *The attention merchants: the epic scramble to get inside our heads* (Alfred A Knof 2016).

¹⁶ Ryan Calo, 'Digital market manipulation' (2013) 82 *The George Washington Law Review*. 995.

relatively novel in European digital policy circles at the time. Throughout the duration of the research, however, the academic and regulatory interest in user influencing practices has surged.¹⁷ There is a growing body of literature on the topic, which covers different, often overlapping, concepts that in essence adopt behavioural mechanisms online to influence or modify user behaviour. They include “deceptive design”, “online choice architectures”, “dark patterns”, “gamification”, as well as “ethical and/or trusted design”.¹⁸ This section provides an account of the evolution of the debate on user influencing practices (section 2.1) and positions hypernudging within that discourse (section 2.2). It further explicates the connection between hypernudging and the power of big technology companies, highlighting the potential of these practices to lead to individual and collective harms (section 2.3).

2.1. User Influencing and the Evolving Transdisciplinary Debate

The study of user influencing, in particular deceptive design, began in User Experience (UX) and design disciplines. In 2010, UX designer Harry Brignull coined the term “dark patterns” as “tricks used in websites and apps that make you do things that you didn’t mean to, such as subscribing for a service or buying something one did not intend to”.¹⁹ Common examples include *inter alia* default options, hidden subscriptions which charge users a re-occurring fee under the pretence of a one-time fee or a free trial or nagging a user to change their course of action. Brignull’s website *darkpatterns.org* was the first to present a collection of user interface design elements aimed to trick, deceive and manipulate users’ behaviour online.²⁰ Successive literature has built upon and expanded different categorizations of dark patterns, focusing on the development of empirical studies and taxonomies.²¹ Ultimately, dark patterns and deceptive design features harness behavioural insights to alter users’ digital choice architectures to steer

¹⁷ See chapter 2 for discussion.

¹⁸ Competition and Markets Authority (CMA), ‘Online choice architecture: How digital design can harm competition and consumers’. Discussion paper (2022) <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1066524/Online_choice_architecture_discussion_paper.pdf> accessed 1 June 2023; Fabian Groh, ‘Gamification: State of the art definition and utilization’ (2012) 39 *Institute of Media Informatics Ulm University* 31; ‘Deceptive Patterns’ <<https://www.deceptive.design>> accessed 2 June 2023; Tech Policy Design Lab, ‘Deceptive design: moving towards trusted design patterns’ <<https://techlab.webfoundation.org/deceptive-design/overview>> accessed 2 June 2023.

¹⁹ Harry Brignull, ‘Dark Patterns’ (2010) <www.darkpatterns.org> accessed 2 June 2023.

²⁰ The collection of manipulative user interface design examples was further picked up in 2014 in Reddit’s *r/assholedesign* thread.

²¹ Colin M Gray and others, ‘The dark (patterns) side of UX design’ (2018 CHI Conference on Human Factors in Computing Systems, Montréal, 21-22 April 2018) <<https://dl.acm.org/doi/pdf/10.1145/3173574.3174108>> accessed 18 August 2023; Arunesh Mathur and others, ‘Dark Patterns at Scale: Findings from a Crawl of 11K Shopping Websites’ in Airi Lampinen, Darren Gergle and David A Shamma (eds), *Proceedings of the ACRM on Human-Computer Interaction, Vol.3, Issue CSCW* (Association for Computing Machinery, 2019).

their behaviour in a predictable way. The underlying mechanism is closely related to “digital nudging”, the concept elaborated upon in chapter 2.

Coinciding with the development of taxonomies and an enhanced ability to characterize and spot these practices, a growing body of empirical research on the prevalence of deceptive design elements started to reveal their ubiquity. For instance, the European Commission’s (the Commission) *Behavioural Study on Unfair Commercial Practices in the Digital Environment (2022)* found that “dark patterns are prevalent and increasingly used by traders of all sizes. (...) According to the mystery shopping exercise, 97% of the most popular websites and apps used by EU consumers deployed at least one dark pattern”.²² The research also focused on understanding the multifaceted individual and collective risks and harms of deceptive design.²³ This formed a solid evidentiary basis for placing these practices at the centre of the emergent EU’s digital policy agenda.

2.2. Situating Hypernudging within User Influencing Discourse

This dissertation aims to define and examine an advanced form of user influencing – *hypernudging* – in its multiple aspects, as well as to situate it in the European competition law framework on abuse of dominance. At the beginning of this research, the notion of “hypernudging” had not been comprehensively developed, with Yeung’s seminal article cited as the leading authority on the subject.²⁴ Other researchers started to refer to “AI nudges” or “algorithmic nudges” – concepts that could, to a large extent, be used with the concept of hypernudging interchangeably.²⁵

Throughout the following chapters, the simplified formulation of hypernudging as “highly dynamically personalised user steering” is used. Furthermore, hypernudging is not a single behaviourally informed design element, but instead, a process where (when executed perfectly) it reaches “the right user, with the right message, by the right

²² Francisco Lupiáñez-Villanueva and others, ‘Behavioural study on unfair commercial practices in the digital environment: dark patterns and manipulative personalisation’ (Publications Office of the European Union, 2022) 6 <<https://data.europa.eu/doi/10.2838/859030>> accessed 2 August 2023.

²³ OECD, ‘Roundtable on Dark Commercial Patterns Online: Summary of discussion’ (2021) <[https://one.oecd.org/document/DSTI/CP/CPS\(2020\)23/FINAL/en/pdf](https://one.oecd.org/document/DSTI/CP/CPS(2020)23/FINAL/en/pdf)> accessed 2 August 2023; Lupiáñez-Villanueva and others (n 22); Federal Trade Commission (FTC), ‘Bringing dark patterns to light. Staff report’ (September 2022) <https://www.ftc.gov/system/files/ftc_gov/pdf/P214800%20Dark%20Patterns%20Report%209.14.2022%20-%20FINAL.pdf> accessed 16 December 2022.

²⁴ Karen Yeung, ‘Hypernudge: Big data as a mode of regulation by design’ (2017) 20(1) *Information, Communication & Society* 118, 129.

²⁵ Marianna Ganapini and Enrico Panai, ‘An audit framework for adopting AI-nudging on children’ (2023) arXiv preprint: 2304.14338; Mareike Möhlmann, ‘Algorithmic nudges don’t have to be unethical’ (*Harvard Business Review*, 2022) <https://www.researchgate.net/profile/Mareike-Moehlmann-2/publication/351059082_Algorithmic_Nudges_Dont_Have_to_Be_Unethical/links/6081c78d2fb9097c0c01d6d7/Algorithmic-Nudges-Dont-Have-to-Be-Unethical.pdf> accessed 2 June 2023.

means, at the right time, as many times as needed” to steer their behaviour.²⁶ While the concept of hypernudging carries several normative aspects underlined by the nudge theory’s proponents and critics, in this thesis, I take a descriptive lens and examine the nature and characteristics of these processes in digital markets.²⁷

Building upon literature from the fields of behavioural economics, Human-Computer Interaction (HCI), and law and information systems (IS), chapter 2 defines hypernudging in reference to its underlying mechanisms and how they evolved in the literature. This context is important for positioning hypernudging in the prolific transdisciplinary multi-stakeholder debate on user influencing online. In this dissertation, I emphasize three main features of hypernudging that render it a particularly advanced form of user influencing: hyper-personalisation, multi-dimensionality, and adaptability to different types of user interfaces.

2.2.1. Hyper-personalisation

Hypernudging processes hinge on hyper-personalisation, which requires specific products, services and content to be presented to users on a one-on-one interaction basis instead of segments or groups they belong to.²⁸ Hyper-personalisation is achieved through continuous collection and processing of (user) data, which is used to profile and target users based on their specific context. Data-driven user profiling enables environmental modifications to take into account users’ “cognitive boundaries, biases, routines and habits”.²⁹ While profiling is still prone to error, where inaccuracies lead to unintended and potentially undesirable outcomes (e.g., users excluded from content

²⁶ This formulation has been adopted throughout the thesis and has also been reflected in Kaptein’s research on ‘Persuasion profiles.’ See: Maurits Kaptein and others, ‘Personalizing persuasive technologies: Explicit and implicit personalization using persuasion profiles’ (2015) 77 *International Journal of Human-Computer Studies* 38, 38.

²⁷ For a systemic literature review on the ethical issues with nudging see: Paul Kuyer and Bert Gordijn, ‘Nudge in perspective: a systematic literature review on the ethical issues with nudging’ (2023) 35(2) *Rationality and Society* 191.

²⁸ Bijendra Tyagi and Dr Vishal Bhatnagar, ‘Hyper-personalised recommendation systems: a systemic literature mapping’ in Vikram Bali and others (eds) *Disruptive Technologies for Society 5.0: Exploration for New Ideas* (Routledge 2022) 69. To understand hyper-personalisation and how it differs from customization, the example of hyper-personalised luxury products that consider consumer’s biological markers (including DNA), to create products that fit them. In this regard, an analogy could be made with using biometric or other intrusive data to infer users’ internal trigger points. See: Mark Rosenbaum and others, ‘The product is me: Hyper-personalised consumer goods as unconventional luxury’ (2021) 129 *Journal of Business Research* 446.

²⁹ Tim-Benjamin Lembcke and others, ‘To nudge or not to nudge: ethical considerations of digital nudging based on its behavioral economics roots’ (27th European Conference on Information Systems 2019, Stockholm and Uppsala, 8-14 June 2019), 5.

that would match their preferences),³⁰ shrinking profiles from the group level to the level of individual users has been an ongoing ambition of digital platforms.³¹

Hypernudging processes are dynamically personalised, in a sense that digital environments can be reconfigured and adapted in real-time, on a large scale, in response to users' changing circumstances and behaviour. In this regard, low-cost experimentation (e.g., A-B testing) creates opportunities to alter and adapt digital environments with ease, with instancy and persistency of adaption unmatched offline.³² This leads to hyper-personalised choice environments, making it particularly difficult for a user to recognize that they are being steered and, by the same token, renders hypernudging more effective compared to other behavioural interventions that are applied to users uniformly.³³

2.2.2. Multidimensionality

Hypernudging is not a single behaviourally informed design element, but a system of elements that work in concert to steer users toward specific pre-determined outcome(s).³⁴ In this regard, the Commission's *Behavioural Study on Unfair Commercial Practices in the Digital Environment (2022)* found that the investigated digital interfaces contained more than one deceptive design element, and this combination led to more effective influencing of users' choices as well as more complicated enforcement for regulatory authorities.³⁵ In addition to having behaviourally informed design elements stacked in the same digital interface, hypernudging processes may allow targeting a user at different times, through different channels, separate elements on their own not being indicative of harmful outcomes.

The multi-dimensionality perspective is best understood in the context of intricately connected platform ecosystems. In the digital economy, digital platforms represent

³⁰ Hideyuki Matsumi and Daniel J Solove, 'The Prediction Society: Algorithms and the Problems of Forecasting the Future' (2023) <<https://ssrn.com/abstract=4453869> or <http://dx.doi.org/10.2139/ssrn.4453869>> accessed 7 August 2023.

³¹ On the goal of establishing "targeting pockets", see: Sandra Wachter, and others, 'The Concentration-after-Personalisation Index (CAPI): Governing Effects of Personalisation Using the Example of Targeted Online Advertising' (2022) <<https://ssrn.com/abstract=4084457>> accessed 2 June 2023.

³² Daniel Susser, 'Invisible influence: artificial intelligence and the ethics of adaptive choice architectures' (2019 AAAI/ACM Conference on AI, Ethics, and Society, Honolulu, 27-28 January 2019) <<https://dl.acm.org/doi/10.1145/3306618.3314286>> accessed 18 August 2023; Natali Helberger and others, 'EU consumer protection 2.0: Structural asymmetries in digital consumer markets' Joint Report from EUCP2. 0 Project BEUC (2021) 3; Aron Darmody and Detlev Zwick, 'Manipulate to empower: Hyper-relevance and the contradictions of marketing in the age of surveillance capitalism' (2020) 7(1) *Big Data & Society* 2053951720904112, 3.

³³ Eyal Peer and others, 'Nudge me right: Personalizing online security nudges to people's decision-making styles' (2020) 109 *Computers in Human Behavior* 106347.

³⁴ See chapter 2; Stuart Mills, 'Finding the 'nudge' in the hypernudge' (2022) 71 *Technology and Society* 102117; Ganapini and Panai (n 25).

³⁵ Lupiáñez-Villanueva and others (n 22), 39.

dominant infrastructural and economic models. The term “digital platform” itself is contested and could be analysed from various disciplines and perspectives.³⁶ In this dissertation, however, a digital platform is defined “as a programmable architecture designed to organise interactions between users”.³⁷ There is a variety of different types of digital platforms, but they all share four key characteristics:³⁸

1. They are part of a multi-sided market and function as *intermediary infrastructures* that bring different user groups together.
2. They exhibit *network effects*, meaning that a platform or a service becomes more valuable the more people are using it.
3. They aim to *maximise user engagement* and in turn collect more data, which is later monetised and transformed into economic value.
4. They aim to make use of intrafirm *cross-subsidisation* to draw in different user groups.

Digital platforms do not exist in a vacuum and are part of dynamic, constantly evolving platform ecosystems that comprise two types of components: core components, which are typically low variety (such as a mobile operating system), and complementary or peripheral components, which tend to be high variety (such as apps).³⁹

From a wider perspective, a platform ecosystem can also be described as a set of interconnected components and services that are (partially) owned and operated by a single company. These components include the core platform services mentioned earlier, which serve as the foundation of that ecosystem. They encompass various services such as operating systems, search engines, social networking services, cloud computing and advertising infrastructures. Core platform services are complemented by peripheral components, developed by a platform itself or its third-party customers. This highlights both the hierarchical and inter-dependent nature of platform ecosystems.⁴⁰

³⁶ For overview of different perspectives, see: Carlo Maria Rossotto and others, ‘Digital platforms: a literature review and policy implications for development’ (2018) 19(1-2) *Competition and Regulation in Network Industries* 93; Annabelle Gawer, ‘Bridging different perspectives on technological platforms: toward an integrative framework’ (2014) 43 *Research Policy* 1239; Fernando van der Vlist, *The platform as ecosystem: Configurations and dynamics of governance and power* (Doctoral thesis, Universiteit Utrecht, 2022).

³⁷ José van Dijck, Thomas Poell, and Martijn de Waal, *The platform society: Public values in a connective world* (Oxford University Press, 2018) 9.

³⁸ Reijer Hendrikse, Rodrigo Fernandez and Tobias Klinge, ‘The big technification of everything’ (2021) 31(1) *Science as Culture* 59, 63. Hendrikse, Fernandez and Klinge, base these four key characteristics on: Nick Srnicek, *Platform Capitalism* (Polity Press 2017) 43-48.

³⁹ Carliss Y Baldwin and Jason C Woodard, ‘The architecture of platforms: a unified view’ (2009) 32 *Platforms, markets and innovation* 19, 21; Amrit Tiwana, *Platform ecosystems: aligning architecture, governance and strategy* (Morgan Kaufmann, 2014). This definition also resembles the Digital Markets Act approach to defining gatekeeping platforms, which requires gatekeepers to have “core platform services”. On this point, see chapter 2.

⁴⁰ José van Dijck, ‘Seeing the forest for the trees: Visualizing platformization and its governance’ (2021) 23(9) *New Media & Society* 2801.

When it comes to hypernudging processes, a distinction can be made between *intra-platform hypernudging* and *inter-platform hypernudging*. The former refers to concerted steering practice that can occur across the different business lines within the single platform ecosystem (e.g., Amazon’s ecosystem with Marketplace, Alexa, Prime Video, Twitch services). The latter involves a platform-agnostic choice architect deploying multiple behavioural interventions in a way that spans across different platforms’ business lines (e.g., a programmatic advertising campaign on Prime Video, YouTube and Instagram).

2.2.3. Adaptability to Different Types of User Interfaces

Hypernudging processes, and user-influencing more broadly, are not exclusive to graphical user interfaces that require users to interact with digital environments in a visual way. The nascent research shows that deceptive design elements are present in voice user interfaces, which allow a user to interact with their devices by a voice command. They are most prevalent in Google and Amazon’s Internet of Things (“IoT”) products compared with other vendors.⁴¹ Chapter 5 examines the mechanics of hypernudging by voice assistants and theorises its potential harms to competition. With the emergence of new digital choice architectures, such as metaverses, AI-powered chatbots and other modes of advancing technology, hypernudging is expected to morph in form too.

2.3. Hypernudging by Big Technology Companies: Exploring Multifaceted Harms

Big technology companies, in popular media also referred to as Big Tech or MAAMA,⁴² possess several characteristics that contribute to hypernudging users at scale and reinforce its specific features: hyper-personalisation in its dynamism aspect and multidimensionality. The ubiquity of their products and services combined with the state-of-the-art technological tools afford these companies unilateral power to shape digital choice architectures and influence user decision-making from the top-down.⁴³ While

⁴¹ For instance, dark patterns are already prevalent in voice user interfaces, Google and Amazon’s products containing more than other vendors. See: Monica Kowalczyk and others, ‘Understanding Dark Patterns in Home IoT Devices’ (CHI Conference on Human Factors in Computing Systems, Hamburg, 23-28 April 2023) <<https://dl.acm.org/doi/10.1145/3544548.3581432>> accessed 18 August 2023.

⁴² When discussing “big technology companies”, I refer to Microsoft, Alphabet, Apple, Meta (formerly Facebook) and Amazon. For instance, see: ‘Big tech’s supersized ambitions’ (*The Economist*, 22 January 2022) <<https://www.economist.com/leaders/2022/01/22/big-techs-supersized-ambitions>> accessed 2 August 2023; ‘The world’s most valuable resource is no longer oil, but data’ (*The Economist*, 6 May 2017) <<https://www.economist.com/leaders/2017/05/06/the-worlds-most-valuable-resource-is-no-longer-oil-but-data>> accessed 2 August 2023.

⁴³ Michal Lavi, ‘Evil Nudges’ (2018) 21 *Vanderbilt Journal of Entertainment and Technology Law* 1, 18.

user influencing discourses place emphasis on examining potential individual harms stemming from these practices, such as infringements on fundamental rights, in this dissertation I show that once hypernudging processes are deployed in a large-scale, systemic manner, they may lead to collective harms.

As a starting point, it is helpful to picture the role of big technology companies in digital markets. They are present in all layers that comprise digital environments, including the digital material and software infrastructures, intermediary platforms that mediate interactions between the platform and its users, and the sectoral platforms which branch out further into private and public sectors.⁴⁴ Due to the scale, resources and growth capabilities, these companies have established themselves at the core of the increasingly digitised economies.⁴⁵ The COVID-19 pandemic – which in part coincided with the writing of this dissertation - was an illuminating moment in time, revealing how much societies and public institutions, including the EU, are dependent on big technology companies and their tools.⁴⁶

From users' perspective, big technology companies have become omnipresent, and to a large extent unavoidable, facilitators of experiences online.⁴⁷ To illustrate, consider the example of smartphones. Smartphone hardware is run on mobile operating systems (OS), which in the EU are limited to two dominant players: Google's Android and Apple's iOS.⁴⁸ By simply carrying a mobile device, an individual may be continuously reached, and their data may be continuously collected (depending on the data collection settings e.g., whether location tracking is enabled).⁴⁹ Mobile operating systems are only one among several core platform services that form the big technology companies' platform ecosystems.⁵⁰ Since users are in a constant state of connectivity, their data can be gathered and combined across the different business lines of a respective digital conglomerate. This allows platforms to create more precise "persuasion profiles" in real-time, in turn contributing to the hyper-personalisation aspect of hypernudging.⁵¹

⁴⁴ Van Dijck (n 40).

⁴⁵ Van Dijck, Poell, and de Waal, (n 37), 12.

⁴⁶ Hendrikse, Fernandez and Klinge (n 38), 59.

⁴⁷ Van Dijck, Poell, and de Waal, (n 37).

⁴⁸ However, Apple's iOS and Google's Android mobile operating systems form two separate relevant markets. See: Case T-604/18 *Google and Alphabet v Commission (Google Android)* [2022] ECLI:EU:T:2022:541, paras 139 and 250.

⁴⁹ European Data Protection Supervisor, 'Mobile devices' <https://edps.europa.eu/data-protection/data-protection/reference-library/mobile-devices_en> accessed 2 June 2023; Yun Shen, 'How much private information was gathered from my phone' (*Norton Life Lock Blogs*, 7 April 2021) <<https://www.nortonlifelock.com/blogs/norton-labs/private-information-gathered-phone>> accessed 2 June 2023.

⁵⁰ Take the example of Google's platform ecosystem, which includes core platform services such as: online search engine, advertising service, web browser, virtual assistant, video-sharing platform, cloud computing services.

⁵¹ Kaptein and others (n 26). However, Digital Markets Act article 5(1) targets this specific practice, and requires user consent to combination of their data across their business services, according to General Data Protection Regulation consent requirements enshrined in article 7.

Furthermore, as big technology companies' platform ecosystems encompass different yet interconnected business lines spanning across various industries, there are plausible opportunities to engage in intra-platform hypernudging.

It is important to note that by focusing on big technology companies I do not negate the possibility of hypernudging being deployed by smaller-scale platforms since, in the digital economy, businesses of all sizes increasingly employ data-driven insights to understand their customers better and optimise performance.⁵² However, in comparison, smaller companies do not have such a wide access to a large (and active) user base across platforms and on a continuous basis, limiting their ability to collect and analyse user data in real-time. This makes hypernudging by big technology companies a particularly interesting subject of inquiry, as by virtue of possessing immense platform power, they are expected not only to reproduce but also magnify the risks of harms that emerge from user influencing practices online.

2.3.1. Hypernudging as Hyper-relevance

The characteristics of big technology companies position them at the top of the hierarchy of control over digital infrastructures that underlie the European "platform society".⁵³ In this context, hypernudging can be perceived as one, among other, manifestation of platform power, with effects spilling into market and non-market domains. Hypernudging processes may take various forms, encompassing economic, social, political and private (including psychological and physical) consequences on users, depending on the aim they are designed to serve.

The impact of hypernudging processes should be assessed against the background of the economic logic that permeates digital environments. As touched upon earlier, user influencing practices form an integral part of digital platforms' business models, with the aim to steer users towards spending more time, attention and/or money on their products or services. It is stressed that the digital economy is a user-centric economy, with profiling and targeting of users being necessary to deliver the most engaging and relevant content.⁵⁴

⁵² Xavier Gabaix and David Laibson, 'Shrouded attributes, consumer myopia, and information suppression in competitive markets' (2006) 121(2) *The Quarterly Journal of Economics* 505.

⁵³ Van Dijck, Poell and de Waal (n 37), chapter 1.

⁵⁴ Alexa Terms of Use, para 1.3 <<https://www.amazon.com/gp/help/customer/display.html?nodeId=201809740>> accessed 2 June 2023; Facebook, Terms of Service <https://www.facebook.com/legal/terms?paipv=0&eav=AfYBfGVr2nIhVZJ70EAoXSD7yHeFzMidBSUFnz5rgTOy3rn-VH8Mq9IK4tN4HjBcl6WM&_rdr> accessed 2 June 2023; Instagram Help Centre, Terms of Use, 'The Instagram Service' <<https://help.instagram.com/581066165581870>> accessed 2 June 2023.

On the one hand, from users' perspective, tailored recommendations and offerings bring a promise of connection, convenience and efficiency, all accessible via ubiquitous digital interfaces. Ultimately, an increasingly user-centric digital economy offers a vision of life where people are empowered to live on their terms, "hyper-relevance" being central to this user empowerment paradigm.⁵⁵

As will be elaborated in chapter 4, in information-rich digital environments, filtering options and nudging users towards preferred content is, to some extent, necessary. These processes can enhance users' welfare and autonomy because they minimise the paradox of choice – cognitive overload and dissatisfaction resulting from having too many options.⁵⁶ In fact, optimising for relevance is one of the key value propositions in digital environments. Therefore, highly dynamically personalised user steering can benefit users as they feel they are getting exactly what they want, when they want it most.

On the other hand, the abovementioned relevance-narrative positions digital platforms as neutral choice architects. This view disregards a potential misalignment between the interests of the user and the platform. When it comes to hypernudging processes and user influencing broadly, they hinge on exploitation of behavioural insights against which people do not have natural cognitive defences. This is because human behaviour, in particular automatic responses, is hardwired and difficult to change.⁵⁷ For example, addictive design elements, such as "infinite scroll", hinge on triggering changes in chemical levels of the brain.⁵⁸ Therefore, behavioural mechanisms may covertly be used to steer user behaviour towards unfavourable, and even harmful, outcomes. With power imbalances and information asymmetries between digital platforms and their users, and particularly big technology companies that are unavoidable facilitators of digital experiences online, hypernudging users on a large-scale, systemic manner can lead to individual as well as collective harms.⁵⁹

⁵⁵ Darmody and Zwick (n 32), 2.

⁵⁶ Barry Schwartz, *The paradox of choice: why more is less* (Revised edn, Harper Collins 2009).

⁵⁷ For instance, on an overview of automatic responses within dual process and dual system theories: Keith Frankish, 'Dual-process and dual system theories of reasoning' (2010) 5(10) *Philosophy Compass* 914.

⁵⁸ Nir Eyal, *Hooked: How to Build Habit-forming Products* (Penguin Group 2014); Jay Hilotin, 'Deadly scroll without end: how infinite scroll hacks your brain and why it is bad for you' (*Gulf News*, 21 February 2023) <<https://gulfnews.com/special-reports/deadly-scroll-without-end-how-infinite-scroll-hacks-your-brain-and-why-it-is-bad-for-you-1.1676965239566>> accessed 2 June 2023.

⁵⁹ Natali Helberger and others, 'Choice architectures in the digital economy: Towards a new understanding of digital vulnerability' (2022) *Journal of Consumer Policy* 175.

2.3.2. Individual and Collective Harms

So far, this introduction has positioned hypernudging processes as an advanced form of user influencing practices already familiar to researchers and regulators, allowing to submit that hypernudging not only replicates but potentially elevates already identified harms. Over the past decade, there have been concerns and mounting evidence of harmful instances of user influencing online, including addiction (e.g., of social media),⁶⁰ experimentation with emotions,⁶¹ privacy violations,⁶² lack of transparency of presented choices,⁶³ and algorithmic biases in information, democratic discourses, and processes.⁶⁴ These concerns have also surfaced on the popular media, strengthening the political momentum for enhancing the safeguards to users' fundamental rights and interests.⁶⁵

Problematic user influencing practices share a commonality of steering users towards undesirable outcomes by manipulative use of behavioural mechanisms. This dissertation does not provide an extensive account of manipulation and instead uses a workable conceptualisation where “an effort to influence people’s choices counts as manipulative to the extent that it does not sufficiently engage or appeal to their capacity for reflection and deliberation”.⁶⁶ Hypernudging processes are manipulative because they are designed to hinder or even block users' reflection upon available options. Chapter 2 examines this point and the resultant harms in more depth.

Hypernudging processes may lead to two types of harms: individual and collective. When assessing the potential impact of user influencing practices, including hypernudging, it is logical to begin by examining the consequences experienced by individual users. After all, by their very nature, user influencing practices target a user (group) with the aim to reach an individual based on their specific internal

⁶⁰ Eyal (n 58).

⁶¹ Adam D I Kramer, Jamie E Guilory and Jeffrey T Hancock, ‘Experimental evidence of massive-scale emotional contagion experiment through social networks’ (2014) 111(24) *PNAS* 8788.

⁶² Colin Gray and others, ‘Dark patterns and the legal requirements of consent banners: An interaction criticism perspective’ (2021 CHI Conference on Human Factors in Computing Systems, Yokohama, 8-13 May 2021) <<https://dl.acm.org/doi/10.1145/3411764.3445779>> accessed 18 August 2023.

⁶³ Amit Chowdhry, ‘Uber: Users are more likely to pay surge pricing if their phone battery is low’ (*Forbes*, 25 May 2016) <<https://www.forbes.com/sites/amitchowdhry/2016/05/25/uber-low-battery/?sh=5c40280574b3>> accessed 2 June 2023.

⁶⁴ Christopher Wylie, *Mindf*ck: Cambridge Analytica and the plot to break America* (Random House 2019).

⁶⁵ For instance, in September 2020, Netflix released the Emmy-winning “The Social Dilemma” documentary. A year later, investigative journalism pieces on “the facebook files” revealed the negative impact Instagram had on teens’ mental health. See: Georgia Wells, Jeff Horwitz and Deepa Seetharaman, ‘the facebook files: Facebook knows Instagram is toxic for teen girls, company documents show’ (*The Wall Street Journal*, 14 September 2021) <<https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739>> accessed 1 June 2023.

⁶⁶ Cass R Sunstein, ‘Fifty Shades of Manipulation’ (2015) *Journal of Behavioral Marketing* 1, 6 <<https://ssrn.com/abstract=2565892>> accessed 7 August 2023.

and external trigger points. This is reflected in user influencing discourses, where a prominent thread of literature distils autonomy-related harms, which include privacy violations, adverse effects on mental well-being and financial loss.⁶⁷ When it comes to hypernudging, by subverting users' decision-making processes, these practices are expected to lead to infringement of autonomy and *de facto* limitation of meaningful choice.⁶⁸ Another strand of research focuses on harms to user equality, in the context of discrimination, lack of inclusivity and other forms of unequal treatment.⁶⁹

Hypernudging by big technology companies can be delivered in a large-scale, systemic manner. As a result, while hypernudging affects individual users, a concerted effort to influence a large group of users, in the aggregate, may lead to collective harms. Such collective harms could relate to *inter alia* the fragmentation of democratic debate and public opinion forming, as well as the distortion of the market mechanism through manipulation of demand.⁷⁰

European competition law, the primary legal field examined in this dissertation, is concerned with harms that materialise in the economic domain (see section 3 below and chapter 3). These harms are necessarily collective harms, capable of affecting the force of competitive constraints in the specific relevant market. Therefore, the examples of hypernudging explored in chapters 4 and 5, on digital advertising and hypernudging by general purpose voice assistants respectively, show that such practices could become a vehicle for dominant undertakings to engage in behaviour that in the aggregate leads to anticompetitive effects on the market.

Chapter 6 leads towards a more fundamental and normative discussion by examining the potential role competition law could and ought to play in addressing the negative effects of political microtargeting, which is a form of hypernudging with (potential) effects extending beyond the economic domain. The discussion is set against the background of big technology companies that serve as political advertising infrastructures and, at the same time, by following financial incentives and treating user-citizens as user-consumers, play a part in the commodification and fragmentation

⁶⁷ Ganapini and Panai (n 25). See also, on user influencing harms more broadly: Jennifer King and Adriana Stephan, 'Regulating privacy dark patterns in practice – drawing inspiration from California Privacy Rights Act' (2021) 5 *Georgetown Law Technology Review* 251; Jamie Luguri and Jacob Strahilevitz, 'Shining Light on Dark Patterns' (2021) 13(1) *Journal of Legal Analysis* 43.

⁶⁸ Robert Baldwin, 'From regulation to behaviour change: giving nudge the third degree' (2014) 77(6) *The Modern Law Review* 831.

⁶⁹ Ganapini and Panai (n 25).

⁷⁰ Calo (n 16); 'The Cambridge Analytica files: a year-long investigation into Facebook, data and influencing elections in the digital age' (*The Guardian*, 18 March 2018) <<https://www.theguardian.com/news/series/cambridge-analytica-files>> accessed 2 June 2023; Shira Ovide, 'The YouTube rabbit hole is nuanced' (*The New York Times*, 21 April 2022) <<https://www.nytimes.com/2022/04/21/technology/youtube-rabbit-hole.html>> accessed 2 June 2023.

of democratic discourses and processes. To answer its research question, this chapter requires stepping outside of the internal framing of European competition law and its predominantly efficiency-oriented interpretation. In this regard, the external framing of the law, as embedded in the EU's constitutional framework and its socio-historical roots (explored in chapter 3), are helpful in assessing how competition policy should contribute to fostering open and democratic society.

Ultimately, one of the underlying themes of this dissertation reveals a paradox: the protection of public values is becoming ever-more important in the economy that champions hyper-individualisation. In fact, collectively shared spaces are also important for the development of individual identity.⁷¹ Therefore, a number of pressing questions remain: where does one draw the line between empowerment and manipulation? How should European digital policy move forward, and which regulatory instruments are best suited to address emergent harms? How can competition policy be developed in a way that would honour the EU's normative commitments in the context of the digital transition?

It is outside the scope of this dissertation to provide a comprehensive answer to these questions. However, throughout the following chapters, I touch upon the relevant themes through the lens of emergent EU digital policy, and European competition law specifically, assessing its suitability and limitations.

3. Legal Background

This dissertation examines hypernudging by big technology companies as a manifestation of market power, with effects that spill into the market domain, the non-market domain, or both concomitantly. The legal assessment focuses on European competition law, in particular on the abuse of dominance prohibition enshrined in article 102 TFEU and whether hypernudging processes could become a *vehicle* for exclusionary leveraging behaviour. In this context, hypernudging is not considered a specific form of abuse because these processes may take various forms, constituting a legitimate business strategy from the perspective of competition. Since the main research question is a prescriptive question, necessitating a normative framework, it goes a step further from analysing the positive law to interrogating the boundaries of European competition law and its application in digital markets.

As touched upon earlier, the timeline when the research was set-up and conducted is important because prior to May 2019, the EU's regulatory response to user

⁷¹ Yeung (n 24), 129.

influencing harms was under-developed.⁷² By the same token, digital markets were not subject to sector-specific regulation, which developed alongside research for this dissertation. Regulatory developments are promising, but do not negate the role that European competition law could play in the mosaic of legal instruments set to address emergent harms of user influencing practices, such as hypernudging. In some respects, competition law and regulation follow different logics and can be perceived as both substitutes and complements to each other, depending on the specific legal and institutional context.⁷³ This section delineates the scope of the dissertation by briefly describing the relevant legal background, in particular zooming in on the abuse of dominance prohibition (section 3.1), and relating it to the broader EU regulatory background for addressing user influencing online (section 3.2).

3.1. Overview of European Competition Law

European competition law is concerned with ensuring that firms operating in a free-market economy do not prevent markets from functioning optimally by engaging in anticompetitive behaviour. It comprises the cartel prohibition (Article 101 TFEU), the abuse of dominance prohibition (Article 102 TFEU), merger control (The EC Merger Regulation), and competition rules applicable to public undertakings and those given special or exclusive rights by Member States (Article 106 TFEU).⁷⁴ The provisions of the Treaty are drafted in a broad manner, their interpretation and meaning left to enforcement and judicial authorities. Chapter 3 of this dissertation delves into the historical background of European competition law, its current enforcement priorities and challenges, to capture the evolving competition policy considerations and normative underpinnings in more depth.

⁷² Mostly in form of soft law instruments. Some of the first publications on the topic: Forbrukerrådet, ‘Deceived by design: How tech companies use dark patterns to discourage us from exercising our rights to privacy’ (2018) <<https://fil.forbrukerradet.no/wp-content/uploads/2018/06/2018-06-27-deceived-by-design-final.pdf>> accessed 8 August 2023; ACM referred to “hypernudging” in the regulatory context for the first time: Autoriteit Consument & Markt (ACM) ‘Protection of the online consumer: Boundaries of online persuasion’ (Guidelines) (2020) <<https://www.acm.nl/sites/default/files/documents/2020-02/acm-guidelines-on-the-protection-of-the-online-consumer.pdf>> accessed 23 August 2023.

⁷³ OECD, ‘Competition Enforcement and Regulatory Alternatives’ (2021) <<https://www.oecd.org/daf/competition/competition-enforcement-and-regulatory-alternatives-2021.pdf>> accessed 7 August 2023.

⁷⁴ Commission, ‘Competition Law Treaty Provisions for Antitrust and Cartels: The Treaty on the Functioning of the European Union (TFEU) Articles relevant to Competition law’ <https://competition-policy.ec.europa.eu/antitrust/legislation/competition-law-treaty-articles_en> accessed 22 August 2023.

3.1.1. Abuse of dominance prohibition

According to Article 102 TFEU (formerly Article 82 EC), which is the focus of this research:

“Any abuse by one or more undertakings of a dominant position within the internal market or in a substantial part of it shall be prohibited as incompatible with the internal market in so far as it may affect trade between Member States”.⁷⁵

The provision distils five cumulative elements that need to be met to establish Article 102 TFEU infringement:

1. There must be *one or more undertakings involved*, which broadly refer to “every entity engaged in an economic activity”.⁷⁶
2. A company must hold a *dominant position*,⁷⁷ which is established by delineating the relevant market in relation to its geographic and product dimensions and determining undertaking’s position in that relevant market.⁷⁸
3. The established dominant position must be held *in the internal market* or substantial part of it.
4. The behaviour of a dominant undertaking must have an *effect on inter-state trade*, which is a jurisdictional criterion, defining the scope of application of European competition law.⁷⁹
5. The dominant firm must engage in *abusive conduct*. While corporate bigness as such is not forbidden under article 102 TFEU, dominant undertakings hold a “special responsibility” not to abuse their market position.⁸⁰ The provision contains a non-exhaustive list of examples of abusive conduct.⁸¹ Furthermore, finding an infringement requires establishing a logically consistent theory of harm, which must articulate how the firm’s behaviour harms competition and competitors.⁸²

⁷⁵ Consolidated version of the Treaty on the Functioning of the European Union (2012) OJ C 326/13, article 102.

⁷⁶ Case C-41/90, *Hofner and Elser v Macrotron* [1991] ECLI:EU:C:1991:161, para 21.

⁷⁷ C-27/76 *United Brands v Commission* [1978] ECLI:EU:C:1978:22, para 65; Case 85/76 *Hoffmann-La Roche & Co AG v Commission* [1979] ECLI:EU:C:1979:36, paras 38-39; Commission, ‘Guidance on the Commission’s Enforcement Priorities in Applying Article 82 of the EC Treaty to Abusive Exclusionary Conduct by Dominant Undertakings’ [2009] OJ C45/2.

⁷⁸ Commission, ‘Notice on the definition of relevant market for the purposes of Community competition law’ OJ C 372/5.

⁷⁹ Commission, ‘Guidelines on the effect on trade concept contained in Articles 81 and 82 of the Treaty’ (Commission’s Notice) OJ C101/81, para 12.

⁸⁰ Case 322/81 *Nederlandsche Banden Industrie Michelin (Michelin I) v Commission* [1983] ECLI:EU:C:1983:313, para 57; Case-209/10 *Post Danmark A/S v Konkurrenceradet* [2012] EU:C:2012:172, para 21.

⁸¹ Case 6-72 *Europemballage Corporation and Continental Can Company Inc. v Commission of the European Communities* [1973] ECLI:EU:C:1973:22, para 26.

⁸² Hans Zenger and Mike Walker, ‘Theories of harm in European competition law: A progress report’ in Jacques Bourgeois and Denis Waelbroeck (eds) *Ten Years of Effects-based Approach in EU Competition Law* (Bruylant 2012).

Note, once abusive conduct is established, a dominant undertaking may try to invoke an *objective justification* for its behaviour and thus potentially avoid article 102 TFEU infringement.⁸³ Nevertheless, the objective justification-plea has not been successfully invoked in practice.

3.1.2. Types of abuses

When it comes to the different types of abusive conduct, a basic distinction can be made between exploitative and exclusionary abuses. The former relates to a dominant undertaking taking advantage of its market position to exploit its customers directly, e.g., through excessive prices.⁸⁴ The latter concerns a dominant firm which engages in anticompetitive behaviour by artificially raising barriers to entry and expansion and excluding competitors from the market. The Commission explicitly prioritises enforcement against exclusionary conduct.⁸⁵ The literature further distinguishes discriminatory conduct, which is generally examined in relation to either exploitative or exclusionary abuses.⁸⁶

This dissertation focuses on exclusionary abuses, in particular, leveraging behaviour. Chapter 4 and chapter 5 examine hypernudging by big technology companies through the lens of differential treatment involving intermediation bias. In this regard, hypernudging processes are not considered to constitute a specific form of abuse, but instead are considered as *means* for abuse to take place.

The decision to narrow the focus on exclusionary leveraging abuses was made for two reasons. Firstly, big technology companies are well-positioned to hypernudge users because of their technological capabilities and control over wide-reaching respective platform ecosystems. These companies are vertically integrated and often have dual roles as infrastructure providers and competitors in downstream markets (e.g., Amazon Marketplace and Amazon Private Brand). This creates not only incentives, but also capabilities to behave in a manner that favours their own, or their business partners', products and services. Throughout the duration of this research, exclusionary leveraging behaviour by big technology companies was a salient topic in competition law literature, as a number of Article 102 TFEU investigations and following decisions focused on this point.⁸⁷ Consequently, this provided me with an opportunity to engage and contribute to the topical debate in a timely manner.

⁸³ Albertina Albors-Llorens, 'The role of objective justification and efficiencies in the application of article 82 EC' (2007) 44 *Common Market Law Review* 1727.

⁸⁴ *United Brands v Commission* (n 77).

⁸⁵ Guidance on the Commission's Enforcement Priorities (n 77).

⁸⁶ Note, article 102 (c) TFEU provides a specific example of discriminatory abuses where a dominant undertaking is prohibited from applying "dissimilar conditions to equivalent transactions" to its customers or suppliers.

⁸⁷ For instance, chapters 4 and 5 extensively reference so-called "Google Saga", which includes decisions related to Google's comparison shopping, Android and AdSense services.

Secondly, the examination of hypernudging from an exclusionary abuse angle provides an original perspective on the subject. As touched upon in chapter 5, academic literature to date focuses on scrutinising personalised business practices and behavioural manipulation as potential exploitative abuses because consumers could be harmed directly.⁸⁸

I acknowledge that the legal analysis on hypernudging vis-à-vis abuse of dominance prohibition covered by this dissertation is not exhaustive, and exploitative abuses could be plausibly assessed too. Thus, I briefly touch upon the relevant arguments related to exploitation in chapters 4, 5 and 7. Moreover, the fast-paced regulatory developments that happened during the research period were too significant not to be accounted for in order to answer the main research question meaningfully. This led to altering the originally intended scope of this dissertation to include the overarching themes of these regulatory developments throughout.

3.2. The Interface between Competition Law and Regulation

Since the beginning of the research project in May 2019, a number of legislative initiatives were proposed and enacted as part of the broader EU's policy as articulated in the Commission's Communication *Shaping Europe's Digital Future (2020)* - a response to the digital transition. Regulatory initiatives, as discussed in section 3.3., are also tackling specific aspects of hypernudging. Therefore, to understand the role that competition law may play alongside relevant regulatory instruments in the EU's digital policy on user influencing, it is necessary to provide a brief primer on the relationship between the two types of legal instruments.

Competition law and regulation aim to address market failures and do so by interfering with the free operation of the market mechanism. Within this broad framework, they provide two distinct legal instruments when it comes to their scope of application, goals, timing, nature of enforcement, and legal obligations imposed.⁸⁹

Competition law is generally applicable across all markets unless explicit exceptions are made. Enforcement takes place retrospectively (*ex post*), with exception of merger

⁸⁸ For example, see: OECD, 'Personalised pricing in the digital era' (2018) <<https://www.oecd.org/competition/personalised-pricing-in-the-digital-era.htm>> accessed 7 August 2023; Christopher Townley, Eric Morrison and Karen Yeung, 'Big data and personalised price discrimination in EU competition law' (2017) 36 *Yearbook of European Law* 683; Marco Botta and Klaus Wiedemann, 'To discriminate or not to discriminate? Personalised pricing in online markets as exploitative abuse or dominance' (2020) 50(3) *European Journal of Law and Economics* 381.

⁸⁹ Niamh Dunne, *Competition law and economic regulation: making and managing markets* (Cambridge University Press 2015); Kati Cseres, 'Intersection of competition and regulation in abuse of dominance and monopolization' in Pinar Akman, Konstantinos Stylianou and Or Brook (eds) *Research handbook on abuse of dominance and monopolization* (Edward Elgar Publishing 2022).

control, and each set of circumstances is examined on a case-by-case basis. Competition rules proscribe certain categories of conduct and are generally considered more dynamic in application than regulation. As a market-oriented instrument, competition law is mainly concerned with economic efficiency goals.

In contrast, regulation applies prospectively (*ex ante*) on a sector-by-sector basis. It prescribes certain outcomes, thereby leading to more systemic but also static rules. Regulation may follow broader goals, including economic efficiency but also social justice considerations.⁹⁰

In light of these differences, there is a tension regarding the relationship between competition law and regulation, since it is possible to view them as substitutes applied exclusively from each other, as well as complements that can be applied simultaneously to achieve most effective market solutions.⁹¹ In the EU legal system, specific circumstances allow for an overlap, with the EU taking a particularly favourable view of the concurrent application of competition law and regulation. Competition law may be enforced against issues that fall in the gaps of *ex ante* regulation as well as conduct that falls within the scope of regulation and is not sufficiently addressed by it.⁹² However, the relationship between both legal instruments is complex and does not follow a one-size-fits-all approach.⁹³

Liberalised network industries, such as telecommunications, provide a helpful example of an interdependent relationship between competition law and regulation, with competition authorities continuing to enforce in this sector prolifically.⁹⁴ The relevant

⁹⁰ For an extensive overview of the differences between competition law and regulation, see: Dunne (n 88), chapter 1; OECD, 'Competition Enforcement and Regulatory Alternatives' (2021) <<https://www.oecd.org/daf/competition/competition-enforcement-and-regulatory-alternatives-2021.pdf>> accessed 7 August 2023.

⁹¹ Cseres (n 89).

⁹² OECD Working Party No.2 on Competition and Regulation, 'Competition Enforcement and Regulatory Alternatives' (2021) 3 <[https://one.oecd.org/document/DAF/COMP/WP2/WD\(2021\)13/en/pdf](https://one.oecd.org/document/DAF/COMP/WP2/WD(2021)13/en/pdf)> accessed 7 August 2023.

⁹³ Complementarity of competition law and regulation is most plausible in two instances: where sectoral regulation and competition law share the same goals, and where sectoral regulation has broader goals that are nevertheless consistent with competition law. Nevertheless, even in cases of overlap, there may be legitimate reasons to choose one instrument over the other: OECD (n 90), 12.

⁹⁴ C-280/08P *Deutsche Telekom AG v European Commission* [2010] ECR I-09555, para 92. Deutsche Telekom could be contrasted with *Trinko*, in which the US Supreme Court rules that sector-specific regulation trumps antitrust rules and allows little to no scope for antitrust claims where that regulation is applicable: *Verizon Communications v. Law Offices of Curtis V. Trinko, LLP* [2004] 540 U.S. 398. On the EU approach, see also: C-202/07 P *France Telecom v Commission* [2009] ECLI:EU:C:2009:214; C-295/12 P *Telefónica and Telefónica de España v Commission* [2014] ECLI:EU:C:2014:2062. Nevertheless, note that other network industries, including postal services and transport, have also been subject to competition law scrutiny, albeit the interaction between competition and regulation is more complex. For instance, see respectively: C-293/15 P - *Slovenská pošta v Commission* [2016], ECLI:EU:C:2016:511; C-42/21 P *Lithuanian Railways (LG) v Commission* [2023] ECLI:EU:C:2023:12.

question is not “whether the ex ante or ex post regime will apply, but (...) which regime provides the more appropriate form of legal redress in the circumstances or whether both types of regimes can apply in tandem”.⁹⁵

A similar approach is expected to be adopted in relation to the emergent sector-specific regulation for digital markets, in particular the Digital Markets Act (DMA), which is discussed in detail in chapter 2.⁹⁶ The DMA is heavily inspired by abuse of dominance investigations into big technology companies and thus in some instances may have overlap in scope.⁹⁷ For instance, the seminal *Google Search (Shopping)* decision underpins the self-preferencing prohibition included in article 6(5). The DMA is set-up to apply without prejudice to article 102 TFEU, but uncertainties remain as to how their relationship will be operationalised in practice.⁹⁸ On the one hand, this signals risks regarding the *ne bis in idem* principle.⁹⁹ On the other hand, a possibility for parallel application may arise where competition law and the DMA would produce different results.¹⁰⁰ Furthermore, just like telecoms, digital markets are prone to disruptive forces of innovation that require continuous oversight to strike a delicate balance between competition and regulation.¹⁰¹ With constantly evolving digital markets bringing unexpected technologies and dynamics, there is a continuous role for competition law to fill-in regulatory gaps.

Finally, the most recent development in the case law concerning the intersection between competition law and data protection rules was delivered in the *Meta Platforms Inc. v Bundeskartellamt* preliminary ruling. According to the Court, a competition authority of a Member State, acting in line with the duty of sincere cooperation with relevant supervisory authorities, may find an infringement of a legal instrument other than competition law when conducting an article 102 TFEU investigation.¹⁰² The ruling is significant because it highlights the importance of coordination among competition and data protection authorities in the future, recognising the synergies and a degree of convergence of enforcement in digital markets. This leaves questions open as to whether

⁹⁵ Peter Alexiadis and Martin Cave, ‘Regulation and competition law in telecommunications and other network industries’ in Robert Baldwin, Martin Cave and Martin Lodge (eds) *The Oxford Handbook of Regulation* (Oxford University Press 2010) 512.

⁹⁶ Regulation (EU) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector and amending Directives (EU) 2019/1937 and (EU) 2020/1828 (Digital Markets Act) [2022] OJ L 265/1, recital 5.

⁹⁷ Alexandre de Stree and others, ‘Enforcing the Digital Markets Act: Institutional Choices, Compliance, and Antitrust’ (2022) *Compliance and Antitrust* 1, 17.

⁹⁸ Digital Markets Act (n 96), article 1(6); Recital 10.

⁹⁹ De Stree and others (n 97), 4; Jasper van der Boom, ‘What does the Digital Markets Act harmonize? – exploring interactions between the DMA and national competition laws’ (2023) 19(1) *European Competition Journal* 57.

¹⁰⁰ Adrian Kuenzler, ‘Third-generation competition law’ (2023) 11 *Journal of Antitrust Enforcement* 133, 141.

¹⁰¹ Alexiadis and Cave (n 95).

¹⁰² C-252/21 *Meta Platforms Inc. v Bundeskartellamt* [2023] ECLI:EU:C:2023:537, para 62.

a similar line of reasoning could be applied to authorities enforcing competition rules in conjunction with other areas of law, such as consumer law.

3.3. Regulatory Developments during the Research Period

During the research period, the EU's digital policy yielded several legislative initiatives that address specific aspects of hypernudging and its harms, explicitly or implicitly (see Annex I for a list of the relevant legislative developments covered in this dissertation). Chapter 2 – an article published on 12 October 2022 – examines hypernudging vis-à-vis the changing European regulatory landscape for digital markets.

It is important to note from the onset that prior to the legislative developments in the digital sector, specific aspects of user influencing practices, including hypernudging, were subject to data protection rules and consumer laws. In fact, these legal fields are the frontrunners in developing the European response to (data-driven) digital nudging. As will be touched upon in chapter 2, with the growing salience of the topic, guidelines were issued to supplement and broaden the interpretation of the existing concepts and rules of these legal regimes. While it is outside the scope of this dissertation to assess data protection rules and consumer laws in depth, it is sufficient to note that they provide only partial solutions to addressing multifaceted user influencing practices. This is not only because of the present siloed legal discourses and thinking regarding the topic, but also because of the limited effectiveness of specific provisions and under-enforcement challenges.

When it comes to the recent legislative initiatives, chapter 2 focuses on three regulations: the DMA, the Digital Services Act (DSA) (at the time of publication, still a proposal), and the proposal for the Artificial Intelligence Act (AI Act). The decision to incorporate these legal instruments marked a deviation from the original research planning, as the legal developments necessarily had to be touched upon to answer the main research question meaningfully. The DMA specifically is expected to have a profound impact on the enforcement of the abuse of dominance prohibition, though the relationship between this legal instrument and competition law is yet to be tested. Ultimately, I did not see it desirable or justified to confine the assessment of hypernudging processes to the siloes of specific legal regimes. The multifaceted nature of these practices and their harms require coherent legal responses with shared vocabulary and overarching priorities from the regulators. However, as will be revealed throughout this dissertation, while the regulatory developments point to a shifting policy focus towards greater protection of public values and fundamental rights, they do not tell a unified story neither in regard to addressing user influencing concerns, nor explicating the overarching values that are to be prioritised in shaping the digital economy.

Given the breadth of the subject, in this dissertation, I focus on identifying the overarching regulatory themes and limitations, and apart from singling out relevant provisions in the abovementioned legal instruments, the focal point of legal analysis remains European competition law. Notably, by focusing on the abuse of dominance prohibition, I do not aim to negate or undermine the positive developments concerning hypernudging brought about by several legislative initiatives. I also do not consider competition rules to have primacy over other regulatory instruments. Instead, I investigate specific circumstances in which European competition law could provide appropriate legal tools to address harm. These circumstances relate to both the contemporary enforcement priorities of European competition law and the EU's normative commitments in shaping the European digital economy. Therefore, this dissertation aims to determine the role that European competition law should play, as part of the developing regulatory environment, in curbing hypernudging harms.

4. Research Question and Methodology

This dissertation takes the form of the legal and normative assessment of hypernudging by big technology companies within the context of abuse of dominance prohibition in European competition law. The **main research questions** this thesis aims to answer is:

What is the role that European competition law ought to play in addressing the challenges of hypernudging by big technology companies?

The following **sub-questions** will be answered to form a coherent and logical line of argumentation:

1. How can hypernudging processes be defined in their multiple aspects?
2. What are the market and non-market effects of hypernudging, and which harms do they lead to?
3. When do hypernudging processes fall under the scope of European competition law?
4. To what extent should European competition law address the market and non-market effects of hypernudging?

4.1. Methodology

This dissertation examines the role that European competition law *ought to* play in addressing the negative market and non-market effects of hypernudging. While throughout the following chapters, I traverse the debate on user influencing, introducing and exemplifying the multifaceted concept of hypernudging, the primary objective remains solving a legal problem. This entails establishing the current state of European

competition law and evaluating its fitness in regard to the identified legal problem, which in this dissertation concerns multifaceted hypernudging harms.

As this is a dissertation based on articles, with added chapters for context and depth, it cannot be said that sub-questions are answered by the consecutive chapters. The argument of this dissertation as a whole is revealed in a top-down approach. Chapter 2 conceptualises the problem of hypernudging and positions it in the broader EU digital policy agenda, focusing on answering sub-questions 1 and 2. Chapter 3 contextualises the research on hypernudging in relation to European competition law and its normative foundations, laying the basis for answering sub-questions 3 and 4.

Chapters 4, 5 and 6 zoom into specific examples of hypernudging to refine research focus and showcase how hypernudging, in its various forms, relates to abuse of dominance prohibition. By examining hypernudging by big technology companies as a vehicle for the self-preferencing type of abuse, chapters 4 and 5 are aimed at answering sub-questions 2 and 3. In addition, chapter 6 examines political microtargeting - a form of hypernudging with effects that extend beyond the economic domain. Positioned within the context of the composite power of big technology companies and their (active) role in shaping democratic discourses, political microtargeting represents a multifaceted issue that is used to contribute to the debate on the nexus between competition law and democracy, and the boundaries of European competition law. Thus, chapter 6 touches upon sub-questions 2, 3 and 4.

Finally, chapter 7 evaluates the findings of the specific examples against the normative framework to answer the main research question and derive recommendations. As such, it once again comes back to sub-questions 2,3 and 4.

4.1.1. Doctrinal and Normative Legal Research

The analysis begins by the description of the positive state of European competition law.¹⁰³ In doing so, I primarily adopt a doctrinal legal research method, which refers to research that “provides a systematic exposition of the rules governing a particular legal category, analyses the relationship between rules, explains areas of difficulty, and perhaps predicts future developments”.¹⁰⁴ The hermeneutic approach is used when engaging in descriptive and explanatory work to identify logical and consistent patterns concerning competition rules on abuse of dominance.¹⁰⁵

¹⁰³ Paul Chynoweth, ‘Legal research’ in Paul Chynoweth, Andrew Knight and Les Ruddock (eds), *Advanced research methods in the built environment* (John Wiley & Sons 2008), 29.

¹⁰⁴ Terry Hutchinson and Nigel Duncan, ‘Defining and describing what we do: doctrinal legal research’ (2012) 17(1) *Deakin Law Review* 83, 101.

¹⁰⁵ Mark van Hoecke, *Methodologies of Legal Research: Which Kind of Method for What Kind of Discipline?* (Bloomsbury, 2013) 4.

Nevertheless, legal problems are often complex, not lending themselves to a straightforward scientific analysis to produce a single accepted answer. To illustrate, “there is no analysis of human preferences and macro-economic structure that is likely to determine how redistributive our economic policies should be”.¹⁰⁶ Similarly, there is no consensually agreed scientific method to draw a line where manipulation becomes harmful, or whether economic systems should be designed in a way that value economic efficiency over freedom or equality of market actors. These types of questions require a normative debate and choosing specific standards of evaluation of the law that is under inquiry.¹⁰⁷ Legal scholarship, in large part, is normative in character. It differs from other disciplines because it adopts a prescriptive purpose which is based contingently: how one should behave if one wants to achieve a specific goal.¹⁰⁸

As the main research question this dissertation aims to answer is a prescriptive question, it necessitates a normative framework which is comprised of the internal and external framing of European competition law (chapter 3). For the purposes of this dissertation, the internal framing refers to the standards, values, and principles that are part of European competition law, while the external framing provides the theories that underlie those standards, values, and principles, as well as the policy aims competition rules serve within the EU legal system as a whole, thus inviting one to step outside the internal boundaries of competition law.¹⁰⁹

I construct the normative framework by examining the external framing of European competition law, where I position this legal field in the broader EU’s constitutional set-up, deriving its foundational values as embedded in the Treaties and uncovering the normative commitments towards the digital transition as explicated in the policy documents. The normative framework, thus, is designed in an abstract, theoretical manner, encompassing a balancing between values, which are identified as affected by hypernudging processes.¹¹⁰

Notably, this research is part of the ERC Starting Grant (No. 852005) project “Modern Bigness”, which develops a novel taxonomy of the power of big technology companies and assesses whether European competition law should tackle the manifold challenges that result from this power. As a result, testing the boundaries of the law by relying on normative legal research is inherent in the very DNA of the overarching project.

¹⁰⁶ Edward L Rubin, ‘Law and the methodology of law’ (1997) *Wisconsin Law Review* 521, 546.

¹⁰⁷ Sanne Taekema, ‘Theoretical and normative frameworks for legal research: putting theory into practice’ (2018) *Law and Method* 1.

¹⁰⁸ Rubin, (n 106), 525 and 534.

¹⁰⁹ Taekema (n 107); Hutchinson and Duncan (n 104), 114.

¹¹⁰ Stravos Makris, ‘Applying Normative Theories in EU Competition Law: Exploring Article 102 TFEU’ (2014) 3 *UCL Journal of Law and Jurisprudence* 30.

4.1.2. Hypernudging Examples

After defining and problematising hypernudging in its multiple aspects (chapter 2) and positioning it as a legal problem that is a subject of inquiry for European competition law (chapter 3), I move away from the hypernudging phenomenon in the abstract. In chapters 4, 5 and 6, I examine three specific examples of hypernudging in ad tech market, general purpose voice assistants' market and political advertising market, respectively. These examples are not case studies in an empirical sense, but their purpose is nevertheless to investigate specific instances of hypernudging phenomena in context.¹¹¹

I have chosen to study these specific markets for the following reasons. Firstly, since the overarching research project “Modern Bigness” concerns the examination of the power of big technology companies in the context of European competition law, in each of the chosen markets big technology companies possess significant market power.

Hypernudging examples as depicted in chapters 4 and 5 fit within the internal framework of European competition law. As such, they were chosen to examine whether and, if so, in which specific circumstances hypernudging can be addressed by European competition law.

I adopted an analogical approach to show that while the chosen examples of hypernudging factually differ from specific relevant cases presented and interpreted by the Court and the Commission, they share sufficient similarities to suggest similar outcomes.¹¹² In this regard, consider the example of hypernudging by voice assistants discussed in chapter 5. The comparison of hypernudging with self-preferencing behaviour established in *Google Search (Shopping)* reveals a similarity between the underlying nudging mechanisms adopted in both cases, with hypernudging expected not only to replicate but also magnify identified concerns.

Finally, the example of political microtargeting as a form of hypernudging was deliberately chosen because it does *not* fit within the current scope of European competition law enforcement. However, big technology companies and their infrastructures are instrumental for political hypernudging and its effects to materialise at scale. By treating user-citizens as user-consumers, these companies in effect commodify democratic processes and the deliberative public sphere. To answer whether competition law should address the harms of political hypernudging to citizen values, it is necessary to examine the very boundaries of the law by considering its external framing and the overarching EU's constitutional set-up.

¹¹¹ John Gerring, ‘What is a case study and what is it good for?’ (2004) 98(2) *American Political Science Review* 341, 342.

¹¹² Chynoweth (n 103), 33.

4.1.3. Interdisciplinary research

Competition law, as any legal discipline, is reactive - it responds to events and is dependent on the context, which needs to be interpreted and analysed for meaning.¹¹³ Especially in uncertain cases, a proper historical, social or technical context is valuable in interpreting the meaning of a rule and how it can be applied.¹¹⁴ This research is set-up against the background of the ongoing digital transition that led to the rise of big technology companies which have amassed significant market power manifesting beyond the economic domain. Hyper-personalisation of user experiences online, changing modes of socialisation and obtaining information, reimagining labour and entrepreneurship, are all examples of the changing societal and cultural norms as a result of technological developments.

By nature of the complex and under-explored legal problem of harmful hypernudging by big technology companies, I adopted an interdisciplinary research method. Acknowledging that legal scholarship needs to rely on other disciplines to characterise contextual details and their effects, I integrated insights from non-legal literature, including behavioural economics, human-computer interaction, information systems, political economy, and philosophy disciplines to capture the multifaceted nature of hypernudging processes, their sources and challenges.¹¹⁵ As such, however, I did not adopt methodologies from those disciplines, but instead accepted their explanatory force and incorporated findings on relevant subject matters.

When describing interdisciplinary research elements adopted in the analysis of European competition law, it is important to note the Law and Economics approach, which since the introduction of the more economic approach in the late 1990s became a prominent methodology for this legal field (see on this development also chapter 3, section 2.2). The Law and Economics approach refers to the economic analysis of law. It is shaped by the Chicago School of thought and is based on neo-classical economic principles, resting upon the idea that markets yield best results for efficient allocation of resources and production, its goal being consumer welfare. Market failures may result in inefficiencies which could justify state intervention; market power is one of such market failures, which can be controlled but not eliminated by competition law.¹¹⁶

The Law and Economics approach adopts economic models that assume market actors to be utility maximisers. These assumptions are said to work because most market actors are rational and act in self-interest, with rationality logically calling

¹¹³ Hutchinson and Duncan (n 104), 116; Rubin (n 106), 536.

¹¹⁴ Chynoweth (n 103), 30.

¹¹⁵ Mathias M Siems, 'The taxonomy of interdisciplinary legal research: finding the way out of the desert' (2009) 7(1) *Journal of Commonwealth Law and Legal Education* 5.

¹¹⁶ Jorge Padilla, 'Neoclassical competition policy without apology' (2022), 2-3. <<https://ssrn.com/abstract=4266176>> accessed 7 August 2023.

for maximisation.¹¹⁷ This aspect of neo-classical economic theory deserves particular attention in relation to hypernudging processes, which are based on behavioural insights and models that question this rationality assumption.¹¹⁸

It is outside the scope of this dissertation to answer whether neo-classical economics theories and tools should be replaced by methods of behavioural economics in competition law enforcement. For the purposes of this dissertation, it is sufficient to describe the status quo on acceptance of behavioural insights in European competition law context, to show that hypernudging does fit within the scope of current article 102 TFEU enforcement.

Over the past decades, the Behavioural Law and Economics movement gained traction in the literature.¹¹⁹ Combining insights from psychology with economic tools, behaviouralists demonstrated that people are different from the *Homo Economicus* of the Law and Economics approach in three main regards: they are boundedly rational, they display bounded willpower and have bounded self-interest.¹²⁰

The value of applicability of the behavioural law and economics method in competition law (enforcement) has been a disputed subject.¹²¹ The discussion predominantly relates to the *usefulness* of behavioural economics insights to competition law enforcement,

¹¹⁷ Robert Cooter and Thomas Ulen, *Law and Economics* (6th edn., Pearson Education Inc 2012).

¹¹⁸ For example, see: Amos Tversky and Daniel Kahneman, 'Judgment under Uncertainty: Heuristics and Biases: Biases in judgments reveal some heuristics of thinking under uncertainty' (1974) 185(4157) *science* 1124, 1124; Thomas J Horton, 'The Coming Extinction of Homo Economicus and the Eclipse of the Chicago School of Antitrust: Applying Evolutionary Biology to Structural and Behavioral Antitrust Analysis' (2011) 42 *Loyola University of Chicago Law Journal* 469, 476; Richard H Thaler, *Misbehaving: the Making of Behavioral Economics* (2nd edn, WW Norton 2016).

¹¹⁹ Christine Jolls, Cass R Sunstein, and Richard H Thaler, 'A behavioral approach to law and economics' (1997) 50 *Stanford Law Review* 1471; Cass R Sunstein, 'Behavioral law and economics: a progress report' (1999) 1 *American Law and Economics Review*. 115; Russel B Korobkin and Thomas S Ulen, 'Law and behavioral science: Removing the rationality assumption from law and economics' (2000) 88 *California Law Review* 1051; Russel Korobkin, 'What comes after victory for behavioral law and economics' (2011) *University of Illinois Law Review*. 1653; Eliana Garcds, 'The Impact of Behavioral Economics on Consumer and Competition Policies' (2010) 6 *Competition Policy International* 145; Avishalom Tor, 'The Methodology of the Behavioral Analysis of Law' (2008) 4 *Haifa Law Review* 237; OECD, 'Summary Record of the Discussion on Behavioural Economics' (2012) <[https://one-oecd-org.proxy.library.uu.nl/document/DAF/COMP/M\(2012\)2/ANNS/FINAL/en/pdf](https://one-oecd-org.proxy.library.uu.nl/document/DAF/COMP/M(2012)2/ANNS/FINAL/en/pdf)> accessed 1 June 2023.

¹²⁰ Max Huffman, 'Marrying Neo-Chicago with Behavioral Antitrust' (2012) 78 *Antitrust Law Journal* 105, 115; Amanda P Reeves and Maurice E Stucke, 'Behavioral Antitrust' (2011) 86(4) *Indiana Law Journal* 1527, 1532.

¹²¹ For critical perspective, see: Joshua D. Wright & Judd E. II Stone, 'Misbehavioral Economics: The Case against Behavioral Antitrust' (2012) 33 *Cardozo Law Review* 1517, 1517; Roger van den Bergh, 'Behavioral antitrust: not ready for the main stage' (2013) 9(1) *Journal of Competition Law and Economics* 203, 203; Alan Devlin and Michael Jacobs, 'The Empty Promise of Behavioral Antitrust' (2014) 37 *Harvard Journal of Law & Public Policy* 1009.

instead of a *replacement* of existing economic theories and tools.¹²² According to the Organisation for Economic Co-operation and Development (OECD), behavioural insights could be applied as a “gap-filler”, providing explanatory evidence as to why anticompetitive effects are likely or take place, they could help to critically assess the assumptions of specific competition policies such as merger control or cartel prosecutions, or they could be used to re-evaluate the fundamentals of European competition law, namely its goals and legal standards to be used to promote those goals.¹²³

The observations regarding the application of behavioural insights to European competition law point towards its evidentiary role in market investigations.¹²⁴ This concurs with the view that the behavioural approach, in principle, ought to be a result-neutral exercise, that is empirically driven to offer competition law a better understanding of market behaviour.¹²⁵ The use of some of the most well-established biases - such as the status quo bias, default bias or saliency bias - did not only find its way into competition law assessments, it would arguably be extreme to ignore factors that are relevant to systemic consumer behaviour, and therefore competition.¹²⁶ While further research into the subject is desired, in the context of hypernudging the current approach would allow investigating users’ responses to such practices in order to supplement evidence on its existence and effects.

4.2. Contribution to the Literature

The original contributions of this dissertation related to three distinct, yet to some extent entwined, topics.

Firstly, in this dissertation, I define the phenomenon of hypernudging in its multiple aspects to provide a useful conceptual tool for researchers and policymakers to ground further empirical research and the problematisation of the phenomenon upon. In doing so, I include and connect different strands of relevant knowledge on nudging, digital nudging and hypernudging practices. By engaging in theoretical development, I contribute to expanding existing literature on online choice architectures and deceptive design, highlighting remaining gaps in the academic discourse and in turn providing further research directions in the transdisciplinary debate.

¹²² OECD, Summary Record of the Discussion on Behavioural Economics (DAF/COMP/M(2012)2/ANNS/FINAL, 13 May 2016).

¹²³ *Ibid.*, 6.

¹²⁴ *Google Search (Shopping)* (Case AT.39740) Commission Decision C(2017) 4444 final [2017] OJ C 9/11, paras 375 and 460; *Google Android* (Case AT.40099) Commission Decision C(2018) 4761 final [2019] OJ C402/19, para 807.

¹²⁵ Avishalom Tor, ‘Understanding Behavioral Antitrust’ (2014) 92(3) *Texas Law Review* 573, 649.

¹²⁶ Amelia Fletcher, ‘The EU Google decisions: extreme enforcement or the Tip of The Behavioral Iceberg?’ (2019) *CPI Antitrust Chronicle* 1, 2.

Secondly, I position novel hypernudging practices in the emergent EU's digital policy agenda. By examining several legal instruments that implicitly tackle aspects of hypernudging, directly or indirectly, I further highlight the emergent regulatory themes as well as benefits and limitations of (proposed) legal frameworks calling for more synergetic and coherent enforcement solutions to address hypernudging – and user influencing more broadly – harms. The assessment of the changing European regulatory landscape for regulating digital markets allowed me to also identify the asserted EU's normative commitments towards supporting the development of digital markets where economy and society work in concert and public values are prioritised. This frame is important for considering how different policies, including competition policy, should be developed and implemented to achieve these explicated normative commitments.

Thirdly, I positioned multifaceted hypernudging harms as a potential legal problem in the context of European competition law, specifically article 102 TFEU. From a legal perspective, the connection between user influencing practices, including hypernudging, and the abuse of dominance prohibition are scarcely explored in the literature. This is because European competition law is traditionally not concerned with safeguarding the rights and interests of individual consumers; the task of ensuring fair business-to-consumer practices is associated with consumer protection rules. In this regard, without minimising the role that different regulatory instruments could play in addressing the potential harms of hypernudging, I outline the circumstances where hypernudging by big technology companies could be considered to fall under the scope of the current European competition law's enforcement priorities. A strong focus is placed on exclusionary leveraging abuses. As such, examining personalised business practices through the lens of exclusionary conduct provides an original perspective because highly personalised unilateral behaviour so far has been assessed in relation to exploitative abuses.

However, hypernudging by big technology companies may lead to harms that extend beyond the economic domain into users' social, political, and private lives. They originate from the composite power of big technology companies, their underlying market logic and power dynamics that play out in digital markets. Zooming out to the broader EU digital policy debate, the normative commitments made towards fostering European (digital) society and European competition law's historical roots, this thesis ultimately deals with the question of whether competition policy should move away from its efficiency-oriented interpretation. As such, it contributes to the wider debate in the field concerning the goals of competition law, its boundaries and enforcement challenges in the context of the digital transition.

5. The Structure of the Dissertation

This is an articles-based dissertation, which is comprised of four chapters that form the main body of research and correspond with the four articles, out of which, at the time of submission, three are published in international peer-reviewed journals and one is under review. In addition, the dissertation contains an introduction (chapter 1), a normative chapter (chapter 3) and a concluding chapter (chapter 7).

An articles-based dissertation was chosen as well-suited to examine the fast-moving topic of user influencing online. As discussed earlier, the digital regulatory landscape has significantly changed since the beginning of this research. The articles-based format allowed me to critically engage with the time-sensitive digital policy debate and contribute to the discussion. However, this choice also led to shortcomings, which must be addressed from the onset.

Firstly, the new relevant regulatory instruments and proposals are not exhaustively included and accounted for in all the published articles. The legal developments are accurate up to the date of publication of each article. According to the *Utrecht University Guidelines on article-based doctoral theses in the School of Law* paragraph 3, articles may be updated by providing an explanation in the introduction or conclusion, or in an addendum to the relevant article. The relevant legal developments and the culmination of my thinking about the subject throughout the years is included in the final chapter 7, including in its recommendations.

Secondly, each article must be developed as a standalone publishable manuscript, setting out the necessary context for the audience to follow the argumentation. Due to the novelty of the subject of hypernudging and the original angle of connecting this form of user influencing with the competition law framework, the articles contain some repetitive explanatory sections.

The dissertation is structured as follows:

Chapter 1: Introduction

This chapter begins with an introduction to the topic of hypernudging in the context of the broader debate on user influencing practices online and identifying its potential harms. It delineates the scope of the research by positioning hypernudging as one of the manifestations of the composite power of big technology companies, connecting it to the European competition law framework and the overarching EU's digital policy agenda. The chapter further presents the aims of the study, its research questions, methodology and contribution to the literature.

Chapter 2: Hypernudging in the Changing European Regulatory Landscape for Digital Markets

Viktorija Morozovaite, 'Hypernudging in the changing European regulatory landscape for digital markets' (2022) 15(1) Policy & Internet 78-99. DOI:<https://doi.org/10.1002/poi.3329>. Published on 12 October 2022.

This chapter is set out to answer 1 and, partially, 2 sub-questions of the research. To do so, it serves a two-fold aim. Firstly, it presents the original consolidated hypernudging framework, which builds upon existing research and consists of cumulative criteria. Specific examples of hypernudging are used to illustrate that these processes may lead to multifaceted and diffuse individual and collective harms. Secondly, hypernudging is positioned in the broader changing European regulatory landscape for digital markets. By examining the Commission's proposals for the DMA, the DSA, and the AI Act vis-à-vis hypernudging processes, it highlights the challenges policymakers face in problematising and capturing the phenomenon in the evolving legal frameworks and policy discourses.

Chapter 3: Normative Underpinnings of European Competition Law

After positioning hypernudging in the broader EU's digital policy agenda and establishing the relevance of several regulatory instruments, this chapter grounds the research in European competition law. It does so by examining its historical roots, current enforcement priorities and challenges. Furthermore, this chapter outlines the conceptual basis for a normative framework, which requires evaluating the role that European competition law *ought to* play in addressing hypernudging challenges. The normative framework is comprised of the concepts of autonomy and equality, the fundamental values upon which the EU is built. In turn, chapter 3 lays down the basis for answering the 3 and 4 research sub-questions.

Chapter 4: Two sides of the Digital Advertising Coin: Putting Hypernudging into Perspective

Viktorija Morozovaite, 'Two sides of the digital advertising coin: putting hypernudging into perspective' (2021) 15(2) Competition & Markets Law Review 105-145. DOI:<https://doi.org/10.34632/mclawreview.2021.10307>. Published on 20 October 2021.

This chapter examines local search advertising on Google Maps as a specific form of hypernudging that could potentially lead to systemic market manipulation effects. In doing so, it positions Google as a systemic actor in the digital advertising value chain, showing that the company is well-positioned to hypernudge consumers towards specific market outcomes; it has the ability and financial incentives to steer within markets. With intermediation bias at play, consumer steering could be examined from the perspective of both exclusionary and exploitative abuse. Chapter 4 focuses on answering sub-questions 2 and 3.

Chapter 5: General Purpose Voice Assistant’s Market

Viktorija Morozovaite, ‘The future of anticompetitive self-preferencing: analysis of hypernudging by voice assistants under Article 102 TFEU’ (2023) European Competition Journal. DOI: <https://doi.org/10.1080/17441056.2023.2200623>. Published on 23 April 2023.

This chapter considers hypernudging by general purpose voice assistants through the lens of abuse of dominance prohibition, showing that advanced user influencing such as hypernudging may become a vehicle for firms to engage in anticompetitive self-preferencing. It focuses on answering sub-questions 2 and 3.

Chapter 6: Political Advertising Market

Viktorija Morozovaite and Anna Gerbrandy, ‘Exploring the nexus between European competition law and democratic society: a case of political microtargeting’ (2023, pending decision in an international peer-reviewed journal).

This chapter examines whether European competition law can and should be used to address the negative effects of political microtargeting – which is a form of hypernudging - on the public sphere. Whilst recognising that European competition law is primarily focused on curbing the negative manifestations of market power and protecting consumer welfare, the argument is progressed by underscoring that the composite nature of big technology companies’ power necessitates a re-assessment of its bounds. It contributes to answering 2, 3 and 4 research sub-questions.

The terms “political microtargeting” and “political hypernudging” in this chapter could be used interchangeably. This is because political microtargeting that employs psychometric profiling techniques meets hypernudging criteria elaborated in chapter 2. The decision was made not to make this connection between political microtargeting and political hypernudging explicit in the published version of the article. Given the wideness of the topic and targeted audience, it was necessary to include several conceptually charged definitions, such as “political microtargeting”, “autonomy” and “equality”. To avoid confusing the reader or providing a superficial account of relevant concepts due to limitations in journal word count, we decided to explicate the interchangeability of the two concepts in the introduction.

It is noteworthy that the manuscript is currently undergoing a journal review process. As a result, the final text of the publication is likely to, at least to some extent, differ from the chapter 6 text as presented in this dissertation to accommodate potential comments from the reviewers. Nevertheless, the line of argumentation in chapter 6 is expected to substantively remain intact as it builds upon previous chapters, in particular chapter 3.

Chapter 7: Conclusion

The final chapter draws the previous chapters together: it builds upon the hypernudging notion, synthesises the case study findings, and identifies common threads and potential contradictions to answer the main research question in light of the normative framework. As such, it touches upon sub-questions 2, 3 and 4.

The conclusions are divided into three parts that reflect the main contributions of this dissertation. The first part outlines the conceptual challenges in user influencing debate and positions hypernudging in that debate. The second part examines the circumstances in which hypernudging by big technology companies would fall under the scope of European competition law. The third part considers hypernudging in the broader EU's digital policy agenda and identifies several overarching emergent regulatory themes. In the concluding remarks, these contributions feed into answering the main research question and providing recommendations.

The closing date of research for the unpublished parts of this thesis, which include chapters 1, 3 and 7, is 1 April 2023. Significant developments that occurred after this date have been sporadically considered and reflected upon.



Chapter 2

Hypernudging in the Changing European Regulatory Landscape for Digital Markets

Viktorija Morozovaite, 'Hypernudging in the changing European regulatory landscape for digital markets' (2022) 15(1) Policy & Internet 78-99. DOI:<https://doi.org/10.1002/poi3.329>. Published on 12 October 2022.

The European regulatory landscape for digital markets is undergoing a transformative change. There is an observed shift towards the protection of public values and fundamental rights, as the market mechanism and market values that traditionally led regulatory processes in digital markets seem to have fallen short. In the context of the user-centric digital economy, a clear commitment to safeguarding citizens' interests is ever-more salient. This article provides a comprehensive account of hypernudging—dynamically personalised user steering, which represents the next generation user influencing techniques online, with the potential to lead to multifaceted individual and collective harms. However, problematising the phenomenon for digital policy purposes is not a straightforward task. Due to the complexity and opaqueness of its underlying mechanisms and effects, policymakers are operating under conditions of uncertainty, necessitating a shared understanding of what impact hypernudging has on users as well as crafting a shared vision of values that ought to be embedded and safeguarded in digital choice architectures. To highlight the developing European approach in relation to hypernudging, the assessment of the recent legislative initiatives—the Artificial Intelligence Act, the Digital Markets Act, and the Digital Services Act—showcases underlying learning opportunities for addressing emergent challenges.

1. Introduction

As digital markets penetrate the fabric of societal structures with data-driven business models, such as hypernudging, posing new challenges to the policymakers¹, the European regulatory landscape is undergoing a transformation.² There is a shift of focus from market values that have traditionally led regulatory processes of markets in Europe, towards safeguarding European citizens' interests and public values, marking the emergence of "European digital constitutionalism."³ However, the critical perspectives highlight the remaining tensions between economic and public values priorities.⁴

In the ever-connected platform-society, the digital world is increasingly experienced through a user-centric lens, with data-driven business strategies built around profiling and targeting users.⁵ Based on their characteristics and circumstances, this user targeting is aimed at influencing their behaviour in the market and public spheres.⁶

Research into human behaviour has shown that people's decision-making is limited by environmental and cognitive constraints.⁷ The design of people's choice environments, including digital interfaces, has a profound impact on how they will interact and respond to presented information. Thus, people can be *nudged* towards predictable

¹ Antonio Manganelli and Antonio Nicita, *Regulating Digital Markets: The European Approach* (Springer 2022) 2.

² Commission, 'A Digital Single Market Strategy for Europe' (Communication) COM/1015/0192 final; Commission, 'Shaping Europe's Digital Future' (Communication) COM/2020/67 final; Commission, '2030 Digital Compass the European way for the Digital Decade' (Communication) COM/2021/118/ final; Commission, 'Establishing Declaration on Digital rights and principles for the Digital Decade' (Communication) COM/2022/27 final.

³ Mariana Mazzucato, Josh Estminger and Rainer Kattel, 'Reshaping platform-driven digital markets' in Martin Moore and Damian Tambini (eds), *Regulating Big Tech: Policy Responses to Digital Dominance* (Oxford University Press 2021); José van Dijck, 'Governing trust in European platform societies: Introduction to the special issue' (2021) 36(4) *European Journal of Communication* 323; Giovanni de Gregorio, *Digital constitutionalism in Europe: reframing rights and powers in the algorithmic society* (Cambridge University Press 2022).

⁴ Robin Mansell, 'Long Read: The Blind Spots in Digital Policy and Practice' (*Media@LSE Blog*, 2021) <<https://blogs.lse.ac.uk/medialse/2021/12/10/long-read-the-blind-spots-in-digital-policy-and-practice/>> accessed 7 August 2023.

⁵ José van Dijck, Thomas Poell and Martijn de Waal, *The platform society: public values in the connective world* (Oxford University Press 2018); Ariel Ezrachi and Viktoria HSE Robertson, 'Competition, market power and third-party tracking' (2019) 42(1) *World Competition* 5.

⁶ Oliver Gertz and Deirdre McGlashan, 'Consumer-centric programmatic advertising' in Oliver Busch, *Programmatic advertising* (Springer International Publishing 2016); Tactical Tech, 'Personal data: Political persuasion. Inside the influence industry. How it works' (2019) <https://cdn.ttc.io/s/tacticaltech.org/Personal-Data-Political-Persuasion-How-it-works_print-friendly.pdf> accessed 7 August 2023.

⁷ Herbert A Simon, 'A behavioral model of rational choice' (1955) 69(1) *The Quarterly Journal of Economics* 99; Amos Tversky and Daniel Kahneman, 'Judgement under uncertainty: heuristics and biases' (1974) 185(4157) *Science* 1124; Daniel Kahneman, *Thinking, fast and slow* (Macmillan 2011).

outcomes based on their specific context in which choices are made.⁸ The potency of and opportunities for nudging are elevated by the unique characteristics of digital environments, distinguishing dynamically

personalised data-driven nudging – *hypernudging* – from its humble offline predecessor.⁹ Digital choice environments are increasingly constructed by artificial intelligence (AI) systems that follow predetermined decision-making parameters, which are largely set by private entities that tend to follow profit-driven imperatives.¹⁰ Through hypernudging, the choice architect – a designer of online choice environments – aims to target the right user, with the right message, by the right means, at the right time, as many times as needed to influence their behaviour in a predictable manner.¹¹ When there is a mismatch between the interests of the choice architect and the user, hypernudging may lead to systemic and multifaceted harms.¹²

In the context of user-centric digital economy, hypernudging processes highlight the multi-layered policy dilemmas in designing effective responses. Problematising this opaque phenomenon is a highly complex task, being further exacerbated by policymakers having limited individual and organisational resources.¹³ Policymakers are required to balance trade-offs between competing values that ought to inform the design of digital choice architectures and develop steps for these values to be translated into concrete solutions.¹⁴ At the fundamental level, for hypernudging to enter the European policymaker’s agenda, its mechanisms and effects must be understood. However, as it is the choice architect that exercises discretion over the norms and values embedded within the logic of hypernudging, both policymakers and users face uncertainty as to the reasoning behind specific outcomes.¹⁵

⁸ Cass R Sunstein and Richard H Thaler, *Nudge: Improving decisions about health, wealth, and happiness* (2nd edn, Penguin Books 2009).

⁹ Karen Yeung, ‘“Hypernudge”: Big Data as a mode of regulation by design’ (2017) 20(1) *Information, Communication & Society* 118.

¹⁰ Revised version: Stuart Mills and Henrik Skaug Sætra, ‘The autonomous choice architect’ (2022) *AI & SOCIETY* 1.

¹¹ Viktorija Morozovaite, ‘Two sides of the digital advertising coin: putting hypernudging into perspective’ (2021) 5(2) *Markets and Competition Law Review* 105.

¹² Daron Acemoglu, ‘Harms of AI’ (2021) NBER Working Paper Series, Working Paper 29247; John P Sullins and Sean Dougherty, ‘Ethical nudging of users while they interact with robots’ in M Nørskov, J Seibt, OS Quick (eds) *Culturally Sustainable Social Robotics: Proceedings of Robophilosophy 2020, Virtual Event* (IOS Press 2020) 346; Aron Darmody and Detlev Zwick, ‘Manipulate to empower: Hyper-relevance and the contradictions of marketing in the age of surveillance capitalism’ (2020) 7(1) *Big Data & Society* 2053951720904112.

¹³ James G March, ‘How decisions happen in organizations’ (1991) 6(2) *Human-computer interaction* 95.

¹⁴ Achim Luhn, ‘Study on policy options in the space of AI’ (2020) <https://eit.europa.eu/sites/default/files/20527-d13_id0025444_study_on_policy_options_in_the_space_of_ai_20527-d13.pdf> accessed 7 August 2023.

¹⁵ Fernando Filgueiras, ‘New Pythias of public administration: ambiguity and choice in AI systems as challenges for governance’ (2022) 37(4) *AI & Society* 1473; March (n 13).

This contribution fills-in the gap in research by showcasing hypernudging as a subject relevant to European Commission's digital policy agenda. Notably, neither hypernudging nor its negative effects are completely novel for European policymakers. The lack of explicit commitment to tackle its harmful manifestations can be partially attributed to the fact that hypernudging mechanisms, their different forms, and effects remain under-conceptualised in the literature. This article aims to address the multifaceted hypernudging concept by answering how the phenomenon can be defined for its harms to be effectively captured and addressed by emergent regulatory frameworks and discourses. To put hypernudging in the changing European regulatory landscape for digital markets, the recent Artificial Intelligence Act (AI Act), the Digital Markets Act (DMA) and the Digital Services Act (DSA) were assessed to highlight the underlying learning opportunities for the developing European approach in relation to these processes.

The first section of this article will introduce a hypernudging framework, which builds upon existing research and consists of cumulative criteria based on Thaler and Sunstein's conceptualisation of the nudge, digital nudging as understood in the Human-Computer Interaction (HCI) literature, and the unique elements of hypernudging.¹⁶ Based on the specific hypernudging examples, the second section will illustrate the potential for its multifaceted harms. It will then set the background for understanding the approach and trade-offs that characterise European policymaking in digital markets and explain why pre-existing legal instruments do not adequately address multifaceted harms. The final section will examine the policymaker's challenges in addressing the phenomenon and drawing upon the approaches adopted in the AI Act, the DMA and the DSA proposals, uncover lessons for the future.

2. From Nudging Citizens to Hypernudging Users

The digital economy is an increasingly user-centric economy, driven by the processes of datafication and commodification of everyday tasks, where (personal) data is transformed into value, asymmetrically captured by private actors.¹⁷ The "individual" is placed as a focal subject of online business strategies, which are aimed to influence user behaviour by exploiting their characteristics and circumstances.¹⁸ One of the

¹⁶ Morozovaite (n 11).

¹⁷ Viktor Mayer-Schönberger and Kenneth Cukier, *Big data: A revolution that will transform how we live, work, and think* (Houghton Mifflin Harcourt 2013); Shoshana Zuboff, *The age of surveillance capitalism: The fight for a human future at the new frontier of power* (Profile Books 2019); Nick Couldry and Ulises A Meijes, 'Data colonialism: Rethinking big data's relation to the contemporary subject' (2019) 20(4) *Television & New Media* 336.

¹⁸ Michal Kosinski, David Stillwell, and Thore Graepel, 'Private traits and attributes are predictable from digital records of human behavior' (2013) 110(15) *PNAS* 5802.

most sophisticated forms of such influencing are hypernudging processes. Building upon existing literature, this section will bridge the gap in research by introducing the consolidated hypernudging framework with the goal of providing a set of cumulative criteria to identify hypernudging in practice.

2.1. Introduction to the Nudge

Hypernudging is built on the insights of linkages between information systems (IS) and behavioural economics theories.¹⁹ The established research into behavioural economics focuses on psychological, social and emotional factors that influence decision-making, aiming to represent the realities of economic actors' behaviour.²⁰ As early as 1936, Keynes referred to these factors as 'animal spirits'²¹, but the journey towards understanding economic actors' behaviour set-off with Herbert Simon's bounded rationality framework:

"...the task is to replace the global rationality of economic man with the kind of rational behaviour that is compatible with the access to information and the computational capacities that are actually possessed by organisms, including man, in the kinds of environments in which such organisms exist".²²

Simon understood that people are boundedly rational, and their decision-making is limited by environmental and cognitive constraints.²³ This laid the groundwork for the research of Daniel Kahneman and Amos Tversky, who established the heuristics and biases approach.²⁴ Their research demonstrated that in situations characterised by high complexity and uncertainty, "people rely on a limited number of heuristic principles which reduce complicated tasks of assessing probabilities and predicting values to simpler judgmental operations."²⁵ However, these can lead to cognitive biases – severe and systemic errors in thinking. It is noteworthy that decision-making errors may also be influenced by "noise", which "consists of unwanted variability in judgements"²⁶,

¹⁹ Tim-Benjamin Lembcke and others, 'To Nudge or not to Nudge: Ethical Considerations of Digital nudging based on its Behavioral Economics roots' (27th European Conference on Information Systems 2019, Stockholm and Uppsala, 8-14 June 2019).

²⁰ Nathan Berg, 'Behavioral economics' in Rhona C Free (ed), *21st century economics: A reference handbook* (Sage Publications 2010).

²¹ John Maynard Keynes, *The general theory of employment, interest and money* (Palgrave Macmillan 2018) 141.

²² Simon (n 7), 99.

²³ Dan Ariely, *Predictably irrational: The hidden forces that shape our decisions* (Harper Collins Publishers 2009).

²⁴ Tversky and Kahneman (n 7).

²⁵ Tversky and Kahneman (n 7), 1124.

²⁶ Cass R Sunstein, 'Governing by Algorithm? No noise and (potentially) less bias' (2021) Harvard Public Law Working Paper No.21-35, 2 <<https://ssrn.com/abstract=3925240>> accessed 7 August 2023; Daniel Kahneman, Olivier Sibony, and Cass R Sunstein, *Noise: a flaw in human judgement* (Little, Brown Spark, 2021).

and occurs regardless of the presence or absence of bias. Subsequent research into heuristics and biases approach has given more weight to the idea that individuals use two distinct cognitive systems to assess information while making decisions: system 1 and system 2.²⁷ The former is described as automatic, heuristic, and intuitive, while the latter refers to processes that are reflective, rule-based, and analytical.²⁸

A practical application of these behavioural economics insights came in the form of the nudge – a now widely theorised, researched, and tested type of behavioural intervention used by governmental actors to help citizens make better decisions as judged by themselves.²⁹ The nudge is defined as “any aspect of the choice architecture that alters people's behaviour in a predictable way without forbidding any options or significantly changing their economic incentives”.³⁰ Choice architecture refers to the context in which people make decisions.³¹ By arranging the decision information, decision structure and decision assistance, the choice architect may exert influence over how people perceive their choices and what they eventually choose.³² Numerous examples demonstrate that tweaking the framing of options or providing a default may have severe implications for people's retirement saving, diet choices or environmentally sustainable behaviour.³³ Despite the popular uptake and some successes, nudging has received criticism on libertarian paternalism and ethical grounds.³⁴ This *normative* discussion, however, is outside the scope of this article that focuses on nudging as understood through its *descriptive* lens and looks at the behavioural intervention's form instead of its normative status.³⁵ Therefore, a consolidated hypernudging framework (see section 2.3) is inclusive of sludge – nudging for malevolent purposes.³⁶

²⁷ Daniel Kahneman and Shane Frederick, ‘A model in heuristic judgement’ in Keith J Holyoak and Robert G Morrison (eds), *The Cambridge handbook of thinking and reasoning* (Cambridge University Press 2005).

²⁸ Keith Frankish, ‘Dual-process and dual-system theories of reasoning’ (2010) 5(10) *Philosophy Compass* 914; Kahneman (n 7).

²⁹ Lembcke and others (n 19).

³⁰ Sunstein and Thaler (n 8), 6.

³¹ *Ibid.*

³² Robert Münscher, Max Vetter, and Thomas Scheuerle, ‘A review and taxonomy of choice architecture techniques’ (2016) 29(5) *Journal of Behavioral Decision Making* 511.

³³ Jonathan Cribb and Carl Emmerson, ‘What happens when employers are obliged to nudge? Automatic enrolment and pension saving in the UK’ (2016) No. W16/19. IFS Working Papers; Pierre Chandon, ‘Which healthy eating nudges work best?’ (*INSEAD*, 8 July 2019) <<https://knowledge.insead.edu/marketing/which-healthy-eating-nudges-work-best>> accessed 7 August 2023; Valeria Fanghella, Giovanna d’Adda and Massimo Tavoni, ‘On the use of nudges to affect spillovers in environmental behaviors’ (2019) 10(61) *Frontiers in Psychology* 1.

³⁴ Daniel M Hausman and Brynn Welch, ‘Debate: to nudge or not to nudge’ (2010) 18(1) *Journal of Political Psychology* 123; Mark D White, *The manipulation of choice: ethics and libertarian paternalism* (Springer, 2013); Cass R Sunstein, *Why nudge? The politics of libertarian paternalism* (Yale University Press, 2014); Adrien Barton and Till Grüne-Yanoff, ‘From libertarian paternalism to nudging—and beyond’ (2015) 6 *Review of Philosophy and psychology* 341.

³⁵ Marijn Sax, *Between empowerment and manipulation: The ethics and regulation of for-profit health apps* (Proefschrift-aio.nl, 2021).

³⁶ Cass R Sunstein, *Sludge: What stops us from getting things done and what to do about it* (MIT Press 2021); Richard H Thaler, ‘Nudge, not sludge’ (2018) 361(6401) *Science* 431.

2.2. Digital Nudging

The digitalisation of our society has led to an increased reliance on (information) technology to assist people in their daily decision-making.³⁷ Digital interfaces are choice architectures too – they present the context in which people make decisions. The insights into behavioural economics and the nudge theory have been incorporated into the IS research, which led to the concept of digital nudging.

The starting point for the discussion about decision-making in digital environments is the fact that they are closely blended with the physical world, rendering a sharp distinction between the “virtual” and the “real” misleading.³⁸ So, if one falls in love while using a dating app, these emotions have implications and may prompt taking action offline.³⁹ While in principle offline and online environments share several similarities, online offers significantly different options for nudging, rendering digital nudging different from the analogue.⁴⁰

As individuals differ from each other, they may react to the same form of nudging in different ways, leading to different outcomes.⁴¹ Online environments are particularly suited to address the problem of heterogeneity of users by offering unique possibilities to personalise their decision-making environments.⁴² This, to a large extent, is possible due to digital platforms’ data collection and processing capabilities that allow tailoring information and delivering nudges based on the individual users’ specific context.⁴³ Thus, online, digital nudging may occur on a personalisation spectrum, with higher degrees of personalisation leading to more user-attuned and effective outcomes.⁴⁴

Furthermore, in contrast to the real-world, where objects such as buildings and alike cannot be reshaped with ease, developers and designers typically have more

³⁷ Lembcke and others (n 19); Schöbel S and others, ‘Understanding user preferences of digital privacy nudges—a best-worst scaling approach’ (53rd Hawaii International Conference on System Sciences, Maui, 7-10 January 2020) 3919 <<https://scholarspace.manoa.hawaii.edu/items/ad77e083-3033-4671-8c3e-08dfc873d99f>> accessed 19 August 2023.

³⁸ Urte Undine Frömming and others, *Digital environments: ethnographic perspectives across global online and offline spaces* (transcript 2017).

³⁹ Lembcke and others (n 19).

⁴⁰ Schöbel and others (n 37); Sandor Dalecke and Randi Karlsen, ‘Designing dynamic and personalized nudges’ (The 10th International Conference on Web Intelligence, Mining and Semantics, Biarritz, 30 June – 3 July 2020) <<https://dl.acm.org/doi/10.1145/3405962.3405975>> accessed 19 August 2023.

⁴¹ Stuart Mills, ‘A theory of personalised nudging: Integrating heterogeneity and behavioral science into political decision-making’ (Doctoral thesis (PhD), Manchester Metropolitan University, 2020); Cass R Sunstein, ‘Impersonal default rules vs. active choices vs. personal default rules: A tryptic’ (2012) <<http://nrs.harvard.edu/urn-3:HUL.InstRepos:9876090>> accessed 7 August 2023.

⁴² Henrik Skaug Sætra, ‘When nudge comes to shove: Liberty and nudging in the era of big data’ (2019) 59 *Technology in Society* 101130; Stuart Mills, ‘Personalized nudging’ (2022) 6(1) *Behavioral Public Policy* 150.

⁴³ Sætra (n 42); Haiyan Fan and Marschall Scott Poole, ‘What is personalization? Perspectives on the Design and Implementation of Personalization in Information Systems’ (2006) 16(3-4) *Journal of Organizational Computing and Electronic Commerce* 179,

⁴⁴ Mills (n 42).

choices to alter digital interface features in a timely manner.⁴⁵ Even though the initial development of digital systems may require significant time and financial investment, the adaptability of those systems and thereby further adjustment possibilities are vast. Many of the alterations can be automated and done in real-time, based on the changing context of the specific user. Thus, testing and then implementing digital nudging tend to be easier, cheaper and faster than in the analogue.⁴⁶

These characteristics, unique to online environments, have a magnifying effect when it comes to benefits and concerns associated with decision-making in offline environments. Take the example of the paradox of choice – the phenomenon documented in the recent cognitive psychology research that showed that “providing more options – particularly if they are highly relevant and success is personally important – will lead to poorer choice and degrade satisfaction”.⁴⁷ Experiments confirmed that oftentimes less is more when it comes to satisfactory decision-making. For instance, employees were more likely to participate in 401(k) pension schemes when there were 2 instead of 59 funds to choose from.⁴⁸ The negative effects of the paradox of choice are exacerbated in the information-rich digital environments that provide users with the vast array of information and choice alternatives.⁴⁹ Purposely designed choice environments, therefore, are particularly important for helping the user to navigate through these endless decision-possibilities. The choice architect may use techniques such as digital nudging to limit the perception of their choice-sets, and lead them towards specific outcomes.⁵⁰ However, problems arise when such steering becomes manipulative or deceptive, and goes against the interests of users.⁵¹

To a large extent, digital nudging can be perceived as a digital representation of nudges as understood in behavioural economics.⁵² However, the potency and opportunities for

⁴⁵ Lembcke and others (n 19).

⁴⁶ Ibid.

⁴⁷ Antti Oulasvirta, Janne P Hukkinen, and Barry Schwartz, ‘When more is less: the paradox of choice in search engine use’ (The 32nd International ACM SIGIR conference on research and development in Information Retrieval, Boston, 19-23 July 2009) <<https://dl.acm.org/doi/10.1145/1571941.1572030>> accessed 19 August 2023.

⁴⁸ Sheena Sethi-Iyengar, Gur Huberman, and Wei Jiang, ‘How much choice is too much? Contributions to 401 (k) retirement plans’ in Olivia S Mitchell and Stephen P Utkus (eds), *Pension design and structure: New lessons from behavioral finance* (Oxford University Press 2004).

⁴⁹ Philipp Lorenz-Spreen and others, ‘How behavioural sciences can promote truth, autonomy and democratic discourse online’ (2020) 4(11) *Nature human behaviour* 1102.

⁵⁰ Morozovaite (n 11).

⁵¹ Arunesh Mathur and others, ‘Dark Patterns at Scale: Findings from a Crawl of 11K Shopping Websites’ in Airi Lampinen, Darren Gergle and David A Shamma (eds), *Proceedings of the ACRM on Human-Computer Interaction, Vol.3, Issue CSCW* (Association for Computing Machinery, 2019); Gregory Conti and Edward Sobieski, ‘Malicious interface design: exploiting the user’ (The 19th International World Wide Web Conference, Raleigh, 26-30 April 2010) <<https://dl.acm.org/doi/10.1145/1772690.1772719>> accessed 19 August 2023.

⁵² Lembcke and others (n 19).

digital nudging are affected by the unique characteristics of digital choice architectures and users' behavioural responses online, distinguishing it from its offline predecessor. Digital nudging is a technique used by the choice architect to intentionally influence (business) users' inputs or decisions. It is not merely a design feature, but an act where the choice architect intentionally harnesses "user-interface design elements [used] to guide people's behaviour in digital choice environments".⁵³

The possibilities to personalise online choice environments allow the choice architect to move away from one-size-fits-all digital nudging familiar to the analogue. A classic example of universal digital nudging is a pre-ticked privacy box that was commonly used to obtain consent from users for processing their personal data when signing-up for an online service.⁵⁴ As users are a heterogeneous group with different preferences and circumstances, adjusting the message, form, time and means of nudging to an individual user has shown to increase the effectiveness of steering.⁵⁵

2.3. Hypernudging Framework

The focus of this article is the most precise data-driven digital nudging techniques, in the nascent literature referred to as *hypernudging*. The term was coined by Karen Yeung refers to:

"[b]ig data-driven nudging [...] providing the data subject with a highly personalised choice environment. Hypernudging relies on highlighting algorithmically determined correlations between data items within data sets that would not otherwise be observable through human cognition alone [...], thereby conferring 'salience' on the highlighted data patterns, operating through the technique of 'priming', dynamically configuring

⁵³ Markus Weinmann, Christoph Schneider, and Jan vom Brocke, 'Digital nudging' (2016) 58(6) *Business & Information Systems Engineering* 433, 433; Christian Meske and Tobias Potthoff, 'The DINU-model—a process model for the design of nudges' (25th European Conference on Information Systems (ECIS), Guimarães, 5-10 June 2017) <https://aisel.aisnet.org/ecis2017_rip/11/> accessed 19 August 2023; Fabian Okeke, Michael Sobolev, and Deborah Estrin, 'Towards a framework for mobile behavior change research' (Technology, Mind and Society, Washington DC, 5-7 April 2018) <<https://dl.acm.org/doi/10.1145/3183654.3183706>> accessed 19 August 2023; Djordje Djurica and Kathrin Figl, 'The effect of digital nudging techniques on customers' product choice and attitudes towards e-commerce sites' (2017) Emergent research forum paper. <<https://core.ac.uk/download/pdf/301371846.pdf>> accessed 7 August 2023.

⁵⁴ Pre-ticked default settings for obtaining users' consent have been outlawed in European Union with the enactment of the General Data Protection Regulation, in particular Art.7 and Recital 32.

⁵⁵ Marjolein Lanzing, "'Strongly recommended'" revisiting decisional privacy to judge hypernudging in self-tracking technologies' (2019) 32(3) *Philosophy & Technology* 549; Eyal Peer and others, 'Nudge me right: Personalizing online security nudges to people's decision-making styles' (2020) 109 *Computers in Human Behavior* 106347; Emir Hrnjic and Nikodem Tomczak, 'Machine learning and behavioral economics for personalized choice architecture' (2019) *arXiv preprint arXiv:1907.02100*.

the user's informational choice context in ways intentionally designed to influence her decisions".⁵⁶

Hypernudging is a densely charged concept that points to a number of characteristics that differentiate it from other nudging techniques. Nevertheless, there is no consensual definition of hypernudging, leading to challenges of identifying these techniques and assessing their effects in practice.⁵⁷ The issues of possible confusion stem from the overly broad formulations of proposed definitions. For instance, consider dynamic personalisation – a distinguishing feature of both hypernudging and recommender systems. While some recommendations delivered by recommender systems can be considered attempts to hypernudge, that is not always the case as hypernudging requires delivering recommendations based on the insights on users' external and internal trigger points.⁵⁸ In addition, some digital nudging definitions include normative criteria of how nudging online ought to be executed. Examples include characteristics of "transparency", "preservation of full freedom of choice" or "increasing private welfare".⁵⁹ This, however, follows the normative perspective which does not always depict the reality of nudging online and may result in excluding practices following less noble intentions.⁶⁰

With technological developments coinciding with the possibilities to engage in hypernudging users, it is desirable to have a clear set of criteria to identify its manifestations and effects in practice. To address the gap in research, this article introduces a consolidated hypernudging framework, which builds upon existing literature, and consists of cumulative criteria, that is based, respectively, on Thaler and Sunstein's conceptualisation of the nudge (1-5), the digital nudging as understood in the HCI literature (6), and the unique elements of hypernudging (7-9).

⁵⁶ Yeung (n 9), 122.

⁵⁷ Hrnjic and Tomczak (n 55); Dirk Helbing and others, 'Will democracy survive big data and artificial intelligence?' in Dirk Helbing (ed), *Towards digital enlightenment: Essays on the dark and light sides of the digital revolution* (Springer 2019); Randi Karlsen and Anders Andersen, 'Recommendations with a nudge' (2019) 7(2) *Technologies* 45.

⁵⁸ For broad formulations, see: Lanzing (n 55); Mathias Jesse and Dietmar Jannach, 'Digital nudging with recommender systems: Survey and future directions' (2021) 3 *Computers in Human Behavior Reports* 100052.

⁵⁹ Lembcke and others (n 19).

⁶⁰ Richard H Thaler, 'The power of nudges, for good and bad' (*New York Times*, 31 October 2015) <<https://www.nytimes.com/2015/11/01/upshot/the-power-of-nudges-for-good-and-bad.html>> accessed 7 August 2023; Richard H. Thaler, 'Nudge, not sludge' (2018) 361(6401) *Science* 431; Sunstein (n 36); George Akerlof and Robert J Shiller, *Phishing for phools: The economics of manipulation and deception* (Princeton University Press 2015).

1. *An aspect of choice architecture*

Hypernudging is implemented by designing elements of user's decision-making environment.

2. *Does not prohibit any options*

Hypernudging must not prohibit any options – it falls short of coercion.⁶¹ It may, nevertheless, be argued that by harnessing knowledge about individual's internal triggers they impose *cognitive constraints* that hinder the exercise of a user's meaningful choice. As a result, while hypernudging should not quantitatively alter the given choice-set, it may limit the quality of its perception.⁶²

3. *Does not significantly change economic incentives*

For a practice to constitute hypernudging, it should not significantly impact users' economic incentives.⁶³ The wording implies that while some form of economic incentives adjustment is possible, what "significantly" entails remains subjectively assessed depending on the context of a particular situation. Hypernudging requires the knowledge of individual user's context, such as preferences and budgetary constraints. Consequently, in commercial hypernudging instances, the granular image of individual consumer's context should lead to hypernudging that matches their economic incentives.

4. *Intentional*

The choice architect is deliberate in designing a behavioural intervention that would lead to desired users' responses.⁶⁴ Choice architectures are inevitable, and it is *intentionality* that separates spontaneous order, uninhibited nature and randomness from elements of conscious design.⁶⁵

5. *Use of psychological insights*

The design of hypernudging processes harnesses individuals' cognitive heuristics and biases instead of attempting to rationally persuade them or coerce them through eliminating certain options.⁶⁶ Digital nudging mechanisms work by making use of

⁶¹ Lembcke and others (n 19).

⁶² Meske and Potthoff (n 53).

⁶³ Sunstein and Thaler (n 8).

⁶⁴ Karen Yeung, 'The forms and limits of choice architecture as a tool for government' (2016) 38(3) *Law & Policy* 186.

⁶⁵ Cass R Sunstein, 'The ethics of nudging' (2015) 32 *Yale Journal on Regulation* 413.

⁶⁶ Sætra (n 42); Schöbel and others (n 37); Brian J Fogg, 'Persuasive technology: Using computers to change what we think and do' (2002) 5 *Ubiquity* 89.

users' cognitive boundaries, routines, and habits.⁶⁷ Therefore, even though these techniques are used deliberately and sometimes transparently, they are designed to operate outside of user's consciousness imposing limitations on her understanding of how she is being hypernuded and what are the consequences of such processes.

6. *Delivered via digital interfaces*

Hypernudging is delivered by complex AI and machine learning algorithms thereby necessitating a digital channel such an online interface or an Internet of Things (IoT) device.⁶⁸

7. *Personalised*

Hypernudging is tailored to each individual based on their specific user context (such as preferences, capabilities and opportunities).⁶⁹

8. *Dynamic*

Hypernudging may react and adjust to the users' online behaviour in real-time.⁷⁰ The most sophisticated hypernudging processes would dynamically adjust not only the form and timing of the specific message aimed at a specific user, but also the means of delivery of that message, depending on the medium they are most responsive to.

9. *Deductive and/or predictive*

Hypernudging processes are based on *inferences* about specific individual's context (personality, predispositions, values and emotions), which are derived from their granular (personal) data. Based on such inferences, predictive analytics may also help to *predict* in real-time the set of users' likely courses of action.⁷¹

⁶⁷ Lembcke and others (n 19).

⁶⁸ Morozovaite (n 11).

⁶⁹ Lanzing (n 55); Dalecke and Karlsen (n 40); Autoriteit Consument & Markt (ACM), 'Protection of the online consumer: Boundaries of online persuasion. Draft consultation document' (2020) <https://www.acm.nl/sites/default/files/documents/2019-12/draft-consultation-acm-guidelines-on-protection-of-online-consumer-boundaries-of-online-persuasion_0.pdf> accessed 18 August 2023.

⁷⁰ Lanzing (n 55); Mills (n 10).

⁷¹ Lanzing (n 55).

Basis	Hypernudging criterion
Behavioural economics grounded nudge theory	1. Aspect of choice architecture
	2. Does not prohibit options
	3. Does not significantly change economic incentives
	4. Intentional
	5. Use of psychological insights
HCI digital nudging literature	6. Delivered via digital interfaces
HCI personalised digital nudging literature and hypernudging as coined in the interdisciplinary law and informatics perspective	7. Personalised
	8. Dynamic
	9. Predictive

Table 1: Consolidated hypernudging framework.⁷²

A further distinction can be made between *intra-platform hypernudging* that occurs within a single platform ecosystem and *inter-platform hypernudging*, where a platform-agnostic choice architect designs hypernudges that span across platforms. Take the example of targeted advertising. In the former scenario, advertisers may target individuals with ads within a closed single platform ecosystem, such as Google. They may set up an advertising campaign on Google Search Network that reach users on services with Internet search engine function. However, while such targeting could be considered dynamic as the ads adjust according to specific user's characteristics and online behaviour, it does not consider whether they would be responsive to ads shown on different services, such as video streaming.⁷³ In contrast, with inter-platform hypernudging, the user may be targeted by ads across multiple platforms, depending on which medium they are most receptive to. Exemplary are the political advertising campaigns ran by Cambridge Analytica, which targeted voters across platforms and their services to steer voting behaviour.⁷⁴

Thus, even though a specific practice may qualify as hypernudging only if it satisfies the outlined cumulative criteria, the examples above illustrate that the degree to which each criterion is met may vary depending on a specific form of hypernudging.

Finally, hypernudging should be viewed as a deliberate *process*, instead of merely a design *feature*, where (market) actors take active part in harnessing digital choice architecture's affordances to exploit users' vulnerabilities. Hypernudging mechanism allows presenting multiple design features or digital nudges, at different times, through different intra-platform or inter-platform channels, which assessed individually may

⁷² Morozovaite (n 11), 118.

⁷³ Morozovaite (n 11).

⁷⁴ Carole Cadwalladr and Emma Graham-Harrison, 'The Cambridge Analytica files' (2018) 21(2) *The Guardian* 6.

not be indicative of problematic behaviour. Thus, “[t]his process can be visualised as a staircase: it is no longer about the choice architect placing a single step aimed to lead the user, but multiple steps that come in different forms, at different times”, and take them on a voyage into a specific decision.⁷⁵ Informing the design of these “steps” by the deep knowledge of users’ propensities, the choice architect can lead them in a way that is not experienced as forceful.⁷⁶ This multi-dimensionality perspective of hypernudging is an understudied research area with arguably most potential to influence user behaviour.

3. Hypernudging as a Policymaker’s Problem: “Unknown (Un)knowns”

As one moves away from theory to its practical applications, it becomes apparent that hypernudging can take different forms, leading to effects in the private sphere, the public sphere, or both concomitantly. From a policymaker’s perspective, problematising hypernudging is not a straightforward task. Problem definition is generally considered the first phase of any policy cycle required to lay the groundwork for further formulation of the policy choices, decision-making, implementation, and evaluation of those choices.⁷⁷ It is not merely a descriptive label but a package of ideas, which is consequential for the further policymaking process as the problem definition affects the feasible set of policy responses.⁷⁸ This section will examine when hypernudging may lead to problematic outcomes and highlight the European policymaker’s dilemmas in addressing them.

3.1. Dark Turn of Digital Nudging

Observing that different forms of digital nudging are already entering European policymaker’s agenda is a logical starting point for problematising the hypernudging phenomenon, which represents the next evolutionary step in relation to the technical

⁷⁵ Morozovaite (n 11), 117.

⁷⁶ Sætra (n 42).

⁷⁷ Janet A Weiss, ‘The powers of problem definition: The case of government paperwork’ (1989) 22 *Policy Sciences* 97.

⁷⁸ Christoph Knill and Jale Tosun, *Public policy: A new introduction* (Bloomsbury Publishing 2020).

aspects and mechanisms that drive its forerunners, thereby to a large extent replicating and exacerbating their potential harms.⁷⁹

When examining user influencing for malevolent purposes, it is important to acknowledge that the terminology lacks conceptual consistency.⁸⁰ As discussed earlier (section 2.1), this article is not concerned with the *normative* discussion, and instead focuses on nudging as understood through its *descriptive* lens, thereby including harmful user influencing practices that follow digital nudging mechanism.⁸¹ The three most prominent, to some extent overlapping, concepts in academic and policy debates are dark patterns⁸², sludge⁸³ and “dark”, or “evil” nudges.⁸⁴ Dark patterns refer to user interface choices that have been carefully crafted to trick users into doing things they may not otherwise. The phenomenon is now mainstream in policy circles. It has been extensively studied and problematised, starting with the collection of examples in 2010, ranging from privacy-intrusive defaults to using scarcity and urgency cues to encourage impulsive purchasing behaviour.⁸⁵ Closely relating to dark patterns is sludge, deliberate use of tactics that create friction and discourage users from acting in their best interest, for instance by including additional steps in cancelling an online subscription, and “evil nudges” which make it easy for consumers to take undesirable action such as one-click purchases.⁸⁶

⁷⁹ ACM (n 69); Francisco Lupiáñez-Villanueva and others, ‘Behavioural study on unfair commercial practices in the digital environment: dark patterns and manipulative personalisation’ (Publications Office of the European Union, 2022) <<https://data.europa.eu/doi/10.2838/859030>> accessed 2 August 2023; European Data Protection Board (EDPB), ‘Guidelines 3/2022 on dark patterns in social media platform interfaces: How to recognize and avoid them. Version 1.0.’ (2022) <https://edpb.europa.eu/system/files/2022-03/edpb_03-2022_guidelines_on_dark_patterns_in_social_media_platform_interfaces_en.pdf> accessed 8 August 2023; Forbrukerrådet, ‘Deceived by design: How tech companies use dark patterns to discourage us from exercising our rights to privacy’ (2018) <<https://fil.forbrukerradet.no/wp-content/uploads/2018/06/2018-06-27-deceived-by-design-final.pdf>> accessed 8 August 2023; Competition and Markets Authority (CMA), ‘Online choice architecture: How digital design can harm competition and consumers’. Discussion paper (2022) <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1066524/Online_choice_architecture_discussion_paper.pdf> accessed 8 August 2023; OECD, ‘Roundtable on dark commercial patterns online: Summary of discussion’ (2021) <[https://one.oecd.org/document/DSTI/CP/CPS\(2020\)23/FINAL/en/pdf](https://one.oecd.org/document/DSTI/CP/CPS(2020)23/FINAL/en/pdf)> accessed 2 August 2023.

⁸⁰ Philip W. Newall, ‘What is sludge? Comparing Sunstein’s definition to others’ (2022) *Behavioral Public Policy*. Advanced Online Publication 1 <<https://doi.org/10.1017/bpp.2022.12>> accessed 8 August 2023; Arnesh Mathur, Mihir Kshirsagar and Jonathan Mayer, ‘What makes a dark pattern... dark? Design attributes, normative considerations, and measurement methods’ (2021 CHI Conference on Human Factors in Computing Systems, Yokohama, 8-13 May 2021) <<https://dl.acm.org/doi/10.1145/3411764.3445610>> accessed 19 August 2023.

⁸¹ Sax (n 35).

⁸² Brignull (n 51).

⁸³ Sunstein (n 41).

⁸⁴ Michal Lavi, ‘Evil Nudges’ (2018) 21 *Vanderbilt Journal of Entertainment and Technology Law* 1.

⁸⁵ For extensive taxonomies, see: Mathur, Kshirsagar and Mayer (n 80); Colin M Gray and others, ‘The dark (patterns) side of UX design’ (2018 CHI Conference on Human Factors in Computing Systems, Montréal, 21-22 April 2018) <<https://dl.acm.org/doi/pdf/10.1145/3173574.3174108>> accessed 18 August 2023.

⁸⁶ CMA (n 79).

What these practices have in common is their manipulative use of psychological insights to steer users' behaviour towards choice architect's preferred outcomes. There is no uniformly accepted account of what manipulation entails.⁸⁷ For the purposes of this article, "an effort to influence people's choices counts as manipulative to the extent that it does not sufficiently engage or appeal to their capacity for reflection and deliberation."⁸⁸ Unlike coercion, manipulation does not affect a person's options but instead focuses on undermining their decision-making powers.⁸⁹ It may be used to further the manipulator's goals, allow the individual to reach her desired outcomes, or both at the same time.⁹⁰

In digital markets, private actors are predominantly driven by profit motives, creating incentives for digital platforms to steer users in a way that deviates from their interests and preferences.⁹¹ The surging regulatory interest in understanding and addressing such manipulative practices stems from increasing awareness about their prevalence and resulting harms in digital choice environments.⁹² On an individual level, users may suffer financial loss, invasion of privacy, cognitive burdens, and infringement of autonomy. On a collective level, identified harms include distortion of competition, erosion of trust in the markets and unanticipated social consequences.⁹³ These findings are particularly troublesome considering the power imbalances and information asymmetries that exist between many digital service providers and their users.⁹⁴

⁸⁷ Eric A Posner 'The Law, Economics, and Psychology of Manipulation' (2015) *University of Chicago Coase-Sandor Institute for Law & Economics Research Paper* 726; Martin T Wilkinson, 'Nudging and manipulation' (2013) 61(2) *Political Studies* 341; Sarah Buss, 'Valuing autonomy and respecting persons: Manipulation, seduction, and the basis of moral constraints' (2005) 115 (2) *Ethics* 19; Robert Noggle, 'Manipulative actions: A conceptual and moral analysis' (1996) 33(1) *American Philosophical Quarterly* 43.

⁸⁸ Cass R Sunstein, 'Fifty shades of manipulation' (2015) *Journal of Behavioral Marketing* 1, 6 <https://dash.harvard.edu/bitstream/handle/1/16149947/manipulation2_18.pdf?sequence=1%26is-Allowed=y> accessed 8 August 2023.

⁸⁹ Daniel Sussler, Beate Roessler, and Helen Nissenbaum, 'Online manipulation: Hidden influences in a digital world' (2019) 4 *Georgetown Law Technology Review* 1.

⁹⁰ Sunstein (n 88).

⁹¹ Georgia Wells, Jeff Horwitz and Deepa Seetharaman, 'the facebook files: Facebook knows Instagram is toxic for teen girls, company documents show' (*The Wall Street Journal*, 14 September 2021) <<https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739>> accessed 8 August 2023; Akerlof and Shiller (n 60); Ryan Calo, 'Digital market manipulation' (2013) 82 *George Washington Law Review* 1001.

⁹² CMA (n 79); Linda Di Geronimo and others, 'UI dark patterns and where to find them: a study on mobile applications and user perception' (2020 CHI Conference on Human Factors in Computing Systems, Honolulu, 23 April 2020) <<https://dl.acm.org/doi/10.1145/3313831.3376600>> accessed 19 August 2023; Mathur and others (n 51).

⁹³ CMA (n 79); Gregory Day and Abbey Stemler, 'Are dark patterns anticompetitive' (2020) 72 *Alabama Law Review* 1.

⁹⁴ Forbrukerrådet (n 79), 7.

3.2. Hypernudging Replicates and Elevates Existing Policy Challenges

Hypernudging processes involve a degree of manipulation because they are designed to hinder or even block users' reflection upon available options, for instance, through emotionally motivating messages.⁹⁵ The seamlessness and invisibility of these practices strengthen their manipulative force, as the user is steered towards choice architect's preferred outcomes by limiting her perception of the available choice-set.⁹⁶ Notably, while hypernudging processes have the potential to lead to multifaceted harms, replicating and elevating the challenges identified with different forms of digital nudging, they are not intrinsically problematic. One can envision several hypernudging applications that empower users to make choices that are important to them: hypernudging towards sustainable consumption, nutrition, or fitness goals.⁹⁷ Therefore, the decisive element for establishing harm is considering whether the user is steered in a way that meets or deviates from their interests and preferences.⁹⁸

The potential harms of hypernudging are *multifaceted* and *diffuse*, encompassing economic, social, political, and private (including psychological and physical) consequences on users. To illustrate, consider hypernudging by voice assistants (VAs). Ready to serve once activated by a voice command, a VA is there to provide comfort by simplifying its owner's mundane tasks.⁹⁹ They are most used to answer quick questions, playing music, shopping, checking the traffic, navigation, and the news.¹⁰⁰ With the help of a VA, a user may also control compatible smart home devices.¹⁰¹ To cater for the specific needs of the owner, a VA may monitor her home environment and record past interactions, thereby learning about her preferences, habits, and personality. Personal data collected at home may be complemented by data collected across different digital services within a respective company's platform ecosystem. This leads to tremendous intimacy between the consumer and the brand, achieved through sensations of being seen, heard, and known.¹⁰² It may also lead to private harms due to the risks to user privacy.¹⁰³

⁹⁵ Robert Baldwin, 'From regulation to behaviour change: Giving nudge the third degree' (2014) 77(6) *The Modern Law Review* 831.

⁹⁶ Lembcke and others (n 19).

⁹⁷ Sax (n 35).

⁹⁸ Sætra (n 42).

⁹⁹ Maurice A Stucke and Ariel Ezrachi, 'How digital assistants can harm our economy, privacy, and democracy' (2017) 32(3) *Berkeley Technology Law Journal* 1239.

¹⁰⁰ Mark McCaffrey and Emma Davis, 'Prepare for the voice revolution' (2018) *PwC Consumer Intelligence Series* <<https://www.pwc.com/us/en/advisory-services/publications/consumer-intelligence-series/voice-assistants.pdf>> accessed 8 August 2023.

¹⁰¹ Revised: David Nield, 'The best smart home systems 2023: Top ecosystems explained. Google Home, Alexa, Homekit, SmartThings and more compared' (*Ambient*, 30 June 2023) <<https://www.the-ambient.com/guides/smart-home-ecosystems-152>> accessed 8 August 2023.

¹⁰² Emily West, 'Amazon: Surveillance as a service' (2019) 17(1-2) *Surveillance & Society* 27.

¹⁰³ Miriam Sweeney and Emma Davis, 'Alexa, are you listening? An exploration of smart voice assistant use and privacy in libraries' (2020) 39(4) *Information Technology and Libraries (Online)* 1; Jide S Edu, Jose M Such and Guillermo Suarez-Tangil, 'Smart home personal assistants: a security and privacy review' (2020) 53(6) *ACM Computing Surveys (CSUR)* 1.

VAs are well-positioned to seamlessly hypernudge users towards specific market and non-market outcomes. The dangers of harmful steering appear, as technology companies are motivated by economic incentives and there is nothing technically precluding them from engineering profit-maximising objectives within their VA's algorithms.¹⁰⁴

Consider a situation where a VA is asked to buy groceries. Once activated by a voice command, it may order several products listed by a consumer. Similarly, a VA may be ordered to regularly scan the smart fridge and make such purchases automatically. What a consumer may not be aware of is that at this point they may already be steered to order from a specific outlet, as some VAs such as Amazon's Alexa comes with the pre-set default for ordering products from, for instance, Amazon.com.¹⁰⁵ Furthermore, without a specific consumer's preference for a product brand, a VA may point them towards home brand or most profitable items, reciting best-selling points. It may do so in a way that frames the product to meet individual consumer's requirements; it may adjust recommendations according to their mood; or, in time, it may recognise a good moment to request a consumer to make it a re-occurring purchase.¹⁰⁶ This way, a VA may tamper with user's perception of options, not necessarily leading them to the best price or quality choice thereby making them incur economic costs. When users are hypernuded in a large-scale, continuous and systemic manner, market manipulation dangers appear.¹⁰⁷

Furthermore, as one of the main VA's functions is providing information to its owner, it is imperative to pay attention to their potential role in influencing opinion-forming in the public sphere.¹⁰⁸ By understanding user's characteristics, preferences and moods, the VA is uniquely positioned to recommend news and content that seamlessly steers the user into a political preference (political consequences); the same type of content may indirectly contribute to inciting hatred and violence towards specific groups (social consequences); or make her question whether coronavirus pandemic is a hoax (private consequences).¹⁰⁹

¹⁰⁴ Richard Feasey and Jan Krämer. 'Implementing effective remedies for anti-competitive intermediation bias on vertically integrated platforms' (2019) Centre on Regulation in Europe asbl (CERRE); Alexandre De Corniere and Greg Taylor, 'A model of biased intermediation' (2019) 50(4) *The RAND Journal of Economics* 858.

¹⁰⁵ Amazon, 'Alexa Shopping' (2021) <https://www.amazon.com/alexa-shopping-hub/b?ie=UTF8%26node=21467932011%26ref=_alxhb_tpnv_shpp> accessed 8 August 2023; Lance Whitney, 'How to shop with echo at places other than Amazon' (*PC*, 17 June 2018) <<https://www.pcmag.com/how-to/how-to-shop-with-echo-at-places-other-than-amazon>> accessed 8 August 2023.

¹⁰⁶ Michal S Gal and Niva Elkin-Koren, 'Algorithmic consumers' (2016) 30(2) *Harvard Journal of Law & Technology* 309.

¹⁰⁷ Jon D Hanson and Douglas A Kysar, 'Taking behavioralism seriously: The problem of market manipulation' (1999) 74 *New York University Law Review* 635; Calo (n 91).

¹⁰⁸ McCaffrey and others (n 100).

¹⁰⁹ Joseph Turow, *The Voice Catchers: How Marketers Listen in to Exploit your Feelings, your Privacy and your Wallet* (Yale University Press 2021); Stucke and Ezrachi (n 99). On limitations of VAs: Henry K Damjanemuya and Nicholas Diakopoulos, "'Alexa, what is going on with the impeachment?'" Evaluating smart speakers for news quality' (Computation + Journalism Symposium 2020, Boston, 20-21 March 2020) <https://bpb-us-w2.wpmucdn.com/sites.northeastern.edu/dist/0/367/files/2020/02/CJ_2020_paper_18.pdf> accessed 19 August 2023.

Hypernudging by VAs is a rich example that points towards a multifaceted nature of its potential harms on individual and collective levels.¹¹⁰ What differentiates hypernudging processes from abovementioned influencing techniques is their subtle nature. While it may be clear that a specific dark pattern aims to trick or deceive, evoking feelings of annoyance and confusion from the user, hypernudging processes are designed to feel normal, as they appeal to an individual's subjective characteristics and circumstances, thereby contributing to user's illusion of being in control of their digital interfaces.¹¹¹

Since hypernudging is generally delivered by proprietary AI systems that follow predetermined decision-making parameters, the norms and values embedded within are largely set by private entities.¹¹² In this context, discerning the reasoning behind algorithmic results, and causal links between attempts to hypernudge and specific outcomes remains a Sisyphean task. To illustrate, consider that even when designed and deployed in a public administration setting, algorithmic decision-making may lead to unexplained discriminatory results and unfair outcomes, highlighting the challenges in controlling the black-box mechanisms.¹¹³ An additional layer of complexity comes with the multidimensional nature of hypernudging processes. Here, an individual feature or elements of digital choice environments, that form part of a complex system, on their own may not be indicative of problematic conduct.¹¹⁴ Therefore, hypernudging is characterised by complexity that inherently creates conditions of uncertainty and ambiguity for both policymakers and users.

4. Hypernudging in the European Digital Policy Agenda: Present and Future

The EU's approach to regulating markets is changing in the digital sphere, seemingly shifting the pendulum towards safeguarding European citizens' rights and public values, away from the previously domineering neo-liberal policies.¹¹⁵ This section will explore how hypernudging fits within the evolving European digital policy agenda,

¹¹⁰ Nathalie A Smuha, 'Beyond the individual: Governing AI's societal harm (2021) 10(3) *Internet Policy Review* 1.

¹¹¹ Maximilian Maier and Rikard Harr, 'Dark patterns—An end user perspective' (2019) 16(2) *Human Technology* 170; Lauren E. Willis, 'Deception by design' (2020) 34(1) *Harvard Journal of Law & Technology* 115.

¹¹² Filgueiras (n 15); Natascha Just and Michael Latzer, 'Governance by algorithms: reality construction by algorithmic selection on the Internet' (2017) 39(2) *Media, culture & society* 238.

¹¹³ Sandra Wachter, Brent Mittelstadt, and Chris Russell, 'Bias preservation in machine learning: the legality of fairness metrics under EU non-discrimination law' (2020) 123 *West Virginia Law Review* 735.

¹¹⁴ Michael Shorter and others, 'Materialising the immaterial: provotyping to explore voice assistant complexities' (Designing interactive systems conference, Virtual Event, Australia, June 2022).

¹¹⁵ Mazzucato, Estminger and Kattel (n 3); Van Dijck, (n 3); de Gregorio, (n 3).

identifying policymakers' challenges in addressing its multifaceted harms. Examining the approaches adopted in the AI Act, the DMA, and the DSA, it will uncover lessons for the future.

4.1. The Shift of European Policymaking for Digital Markets

Since the late 1990s, the neoliberal model has been the dominant normative and legal framework for the regulation of markets in Europe.¹¹⁶ Centring around the promotion of competition, it materialised in the European pursuit of market integration through economic liberalisation, privatisation, and reregulation policies.¹¹⁷ This neo-liberal vision necessitates a division between the laws that regulate the public realm, aimed to guarantee the rule of law and fundamental rights, and the laws that govern economic matters.¹¹⁸

Fast-forward to today, the EU is emerging as one of the leading global forces in regulating digital markets.¹¹⁹ The revision of pre-existing regulatory frameworks emanated in response to a plethora of concerns and evidence of the dynamics of digital markets, leading to concentrations of private power and infringements of fundamental rights.¹²⁰

It is broadly accepted that European digital policy is oriented towards protection of public values and citizens' interests, as the market mechanism and market values that traditionally led regulatory processes seem to have fallen short.¹²¹ This shift has been coined European digital constitutionalism – “a reaction against power exercised by online platforms, which are increasingly involved in determining the scope of rights and

¹¹⁶ Vivien A Schmidt and Mark Thatcher, 'Why are neoliberal ideas so resilient in Europe's political economy?' (2014) 8(3) *Critical Policy Studies* 340; Fritz W Scharpf, 'The double asymmetry of European integration: Or: why the EU cannot be a social market economy' (2009) No. 09/12. MPIfG Working Paper.

¹¹⁷ Angela Daly, *Private power, online information flows and EU law: Mind the gap* (Vol. 15) (Bloomsbury Publishing 2016).

¹¹⁸ Revised version: Elettra Bietti, 'A Genealogy of Digital Platform Regulation' (2021) 7(1) *Georgetown Law and Technology Review* 1.

¹¹⁹ José van Dijck, 'Seeing the forest for the trees: Visualizing platformization and its governance' (2021) 23(9) *New Media & Society* 2801; A digital single market strategy for Europe (n 2); Shaping Europe's digital future (n 2); 2030 digital compass: The European way for the digital decade (n 2).

¹²⁰ Van Dijck (n 119); Nir Eyal, *Hooked: How to build habit-forming products* (Penguin Group 2014); Ronan Ó Fathaigh, Natali Helberger, and Naomi Appelman, 'The perils of legally defining disinformation' (2021) 10(4) *Internet policy review* 1; Sarah Eskens, *The fundamental rights of news users: The legal groundwork for a personalised online news environment* (Proefschrift-aio.nl 2021); Cass R Sunstein, *#Republic: Divided democracy in the age of social media* (Princeton University Press 2018); Martin Kenney and John Zysman, 'The rise of the platform economy' (2016) 32(3) *Issues in science and technology* 61; Eli Pariser, *The filter bubble: What the internet is hiding from you* (Penguin Books 2011).

¹²¹ Mazzucato, Estminger and Kattel (n 3).

freedoms in the information society.”¹²² In line with the EU’s social market economy goal, the emerging digital constitutionalism strives to protect against complete digital commercialisation and digital surveillance state.¹²³ However, despite a concrete attempt to embed digital policy in European public values, policymakers struggle to balance the economic and public interests at stake.¹²⁴ Critically, digital markets continue to be viewed as something to be fixed to enable market value creation instead of placing public value as an end itself.¹²⁵

Against this backdrop, several challenges are highlighted when considering how hypernudging processes and their harms can be effectively captured by the evolving European regulatory frameworks and discourses. After all, hypernudging processes are not confined to the market sphere, necessitating a need to define and understand this phenomenon in its multiple aspects. When it comes to non-market effects, they can rarely be disentangled from digital platforms’ economic logic. Therefore, how regulations in the two spheres interact and how policymakers would resolve the emerging value trade-offs are questions that ought not to be taken lightly, given that in scenarios involving hypernudging, they are more often than not inextricably linked.

The European response to the (data-driven) digital nudging in consumer protection and data protection policy areas is informative in depicting the tensions in balancing different constitutional values and moving towards architecture-level solutions.¹²⁶ The mounting evidence of harms led to issuing piecemeal guidelines to supplement and broaden the interpretation of existing concepts and rules to cover (data-driven) user influencing practices.¹²⁷ The guidance documents attempt to touch upon the relationships with other relevant legal frameworks but generally focus on providing partial solutions within the respective legal regimes. Apart from the risk of a fragmented approach, the guidelines do not pierce at the heart of systemic harms.

¹²² Giovanni de Gregorio, ‘The rise of the digital constitutionalism in the European Union’ (2021) 19(1) *International Journal of Constitutional Law* 41, 53.

¹²³ Consolidated version of the Treaty on European Union and the Treaty on the Functioning of the European Union [2012] OJ C326/01, article 3; Anna Gerbrandy, Willem Janssen, and Lyndsey Thomsin, ‘Shaping the Social Market Economy after the Lisbon Treaty: How Social Is Public Economic Law?’ (2019) 15 *Utrecht Law Review* 32; Christopher Gohl and others, ‘Social market economy for the 21st century: An international peace project’ (*Welethos Institute*, 2021) <<https://weltehos-institut.org/en/news/social-market-economy-for-the-21st-century-an-international-peace-project/>> accessed 8 August 2023.

¹²⁴ Mansell (n 4).

¹²⁵ Mariana Mazzucato and Josh Ryan-Collins, ‘Putting value creation back into “public value”: from market-fixing to market-shaping’ (2022) 25(4) *Journal of Economic Policy Reform* 345.

¹²⁶ Natali Helberger and others, ‘Choice architectures in the digital economy: Towards a new understanding of digital vulnerability’ (2022) *Journal of Consumer Policy* 175.

¹²⁷ Commission, ‘Proposal for a Regulation of the European Parliament and of the Council on a Single Market For Digital Services (Digital Services Act) and amending Directive 2000/31/EC’ [2020] COM/2020/825 final; EDPB (n 79).

While it is outside the scope of this paper to delve into the provisions of consumer law and data protection rules in depth, on a meta-level it is important to stress that both are based on the paradigm of individual empowerment and use information as a tool to promote autonomy and choice of an individual.¹²⁸ In this neoliberal model of agency, transparency is intimately linked to the ideal of effective control of algorithmic decision-making, disproportionately placing the responsibility on an individual.¹²⁹

To illustrate, consider European legal rules for cookies - small text files containing pieces of data that are instrumental in tracking and profiling users based on their online activity.¹³⁰ According to the ePrivacy Directive (eDP), coined as the “cookie law”, the user must consent to the usage of cookies and other tracking technologies unless a limited set of exceptions apply.¹³¹ This provision specifies the relevant rules in the General Data Protection Regulation (GDPR), a legal framework for the collection and processing of individuals’ personal data, which states that once cookies are used to identify individuals, they qualify as personal data and therefore need a legal basis to be processed lawfully.¹³² These rules led to a proliferation of cookie banners, utilised to inform the user of their rights about cookies and obtain consent to activate them, helping to limit harmful hypernudging at its source – unwanted user tracking and profiling.

¹²⁸ EDPB (n 79); ‘Guidance on the interpretation and application of Directive 2005/29/EC of the European Parliament and of the Council concerning unfair business-to-consumer commercial practices in the internal market’ (2021) C526/1; Inge Graef and Bart van der Sloot, ‘Collective data harms at the crossroads of data protection and competition law: Moving beyond individual empowerment’ (2022) 33(4) *European Business Law Review* 513; Natali Helberger, Frederik Zuiderveen Borgesius, and Agustin Reyna, ‘The perfect match? A closer look at the relationship between EU consumer law and data protection law’ (2017) 54(5) *Common Market Law Review* 1427.

¹²⁹ Lilian Edwards and Michael Veale, ‘Slave to the algorithm? Why a right to an explanation is probably not the remedy you are looking for’ (2017) 16 *Duke Law and Technology Review* 18; Mike Ananny and Kate Crawford, ‘Seeing without knowing: Limitations of the transparency ideal and its application to algorithmic accountability’ (2018) 20(3) *new media & society* 973.

¹³⁰ Clare Stouffer, ‘Computer cookies: A definition + how they work in 2023’ (Norton, 2 August 2022) <<https://us.norton.com/internetsecurity-privacy-what-are-cookies.html>> accessed 8 August 2023.

¹³¹ Directive 2009/136/EC of the European Parliament and of the Council of 25 November 2009 amending Directive 2002/22/EC on universal service and users’ rights relating to electronic communications networks and services, Directive 2002/58/EC concerning the processing of personal data and the protection of privacy in the electronic communications sector and Regulation (EC) No 2006/2004 on cooperation between national authorities responsible for the enforcement of consumer protection laws [2009] OJ L 337, article 5(3).

¹³² 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) [2016] OJ L 119/1, recital 30 and article 6.

While the measures constitute an improvement to users' privacy and increase the transparency of digital environments, they are not as effective as intended.¹³³ Cookie banners fall within the "notice and choice" paradigm, which is ridden with widely examined limitations.¹³⁴ Studies on cookie banners confirm that user awareness of online privacy is still low.¹³⁵ Users lack functional and usable mechanisms to exercise their rights effectively.¹³⁶ Strikingly, the tools meant to empower users may contain dark patterns deceiving them towards privacy-degrading options.¹³⁷ It is also not uncommon for tracking to occur without users' consent, especially in mobile application settings.¹³⁸ These concerns are coupled with under-enforcement by data protection authorities, which lack the appropriate tools and resources to detect infringements.¹³⁹

The above findings showcase that in digital markets, characterised by user vulnerabilities being embedded and exploited within the digital services' architectural layers, consent mechanisms promote individual self-reliance that tilts the balance towards prioritising market values at the cost of citizens' rights.¹⁴⁰ In this context, the structural and collective dimension of hypernudging harms is neglected, necessitating broadening policy choices beyond individuals.

¹³³ Iskander Sanchez-Rola and others, 'Can I opt out yet? GDPR and the global illusion of cookie control' (ACM Asia Conference on Computer and Communications Security, Auckland, 9-12 July 2019) <<https://dl.acm.org/doi/10.1145/3321705.3329806>> accessed 19 August 2023; Martin Degeling and others, 'We value your privacy... now take some cookies: Measuring the GDPR's impact on web privacy' (2018) *arXiv preprint arXiv:1808.05096*.

¹³⁴ Konrad Kollnig and others, 'A Fait Accompli? An Empirical Study into the Absence of Consent to {Third-Party} Tracking in Android Apps' (Seventeenth USENIX Conference on Usable Privacy and Security, Virtual event, 9-10 August 2021) <<https://www.usenix.org/system/files/soups2021-kollnig.pdf>> accessed 19 August 2023.

¹³⁵ Martino Trevisan and others, '4 years of EU cookie law: Results and lessons learned' (2019) 2 *Proceedings on Privacy Enhancing Technologies*, 2019 126.

¹³⁶ Degeling and others (n 133); Cristiana Teixeira Santos, Nataliia Bielova, and Célestin Matte, 'Are cookie banners indeed compliant with the law? Deciphering EU legal requirements on consent and technical means to verify compliance of cookie banners' (2019) *arXiv preprint arXiv:1912.07144*.

¹³⁷ Than Htut Soe, Cristiana Teixeira Santos and Marija Slavkovic, 'Automated detection of dark patterns in cookie banners: how to do it poorly and why it is hard to do it any other way' (2022) *arXiv preprint arXiv:2204.11836*.

¹³⁸ Kollnig and others (n 134); Sanchez-Rola and others (n 133).

¹³⁹ Trevisan and others (n 135); BEUC, 'Dark patterns and the consumer law acquis. Recommendations for better enforcement and reform' (2022) <https://www.beuc.eu/sites/default/files/publications/beuc-x-2022-013_dark_patterns_paper.pdf> accessed 8 August 2023.

¹⁴⁰ Helberger and others (n 126); Ivan Manokha, 'User consent for data processing: GDPR as a paradigmatic neoliberal device' (*E-International Relations*, 6 July 2022) <<https://www.e-ir.info/2022/07/06/user-consent-for-data-processing-gdpr-as-a-paradigmatic-neoliberal-device/>> accessed 8 August 2023.

4.2. Towards a Future-Proof Digital Policy

According to institutional theory, policy decisions are made considering accumulated learning from the past, understanding the present, and predicting the future.¹⁴¹ Decision-making can be viewed through the lens of small incremental steps wherein the focus on the means sometimes trumps the ends.¹⁴² As the EC specialises in regulatory rather than redistributive policies, knowledge and expertise are essential resources in regulatory policymaking.¹⁴³ In this context, the European digital policy is evolving to address the structurally embedded concerns that affect digital markets' contestability, fairness, and trustworthiness, including seamless and opaque hypernudging processes.

For this article, the analysis of the recent legislative initiatives is chosen to assess the European approach to designing a coherent legislative framework for digital markets addressing market and non-market effects: the AI Act aimed to create an ecosystem of excellence and trust in the field of AI, the DMA which focuses on ensuring that digital markets remain fair and contestable for innovators, businesses and new market entrants, and the DSA, a legal instrument set to increase and harmonise the responsibilities of online platforms and information service providers towards end users. While neither of the proposals addresses hypernudging directly, they include provisions important for guiding future policy developments in digital markets.

Considering that AI systems are becoming the omnipresent facilitators of hypernudging, it is relevant to firstly bring attention to the AI Act proposal, which takes a principled risk-based approach to regulating different uses of AI with the goal to drive market innovation and mitigate the risks, in particular the negative impact on fundamental rights.¹⁴⁴ The AI Act attempts to strike a balance between protection of market and non-market values, albeit when it comes to the latter, the prohibitions and requirements concerning unacceptable and high-risk AI systems focus on very specific, well-problematised uses of technology in the context of most vulnerable societal groups as well as provision of public service.¹⁴⁵ Thus, they do not cover a wide range of

¹⁴¹ Filgueiras (n 15).

¹⁴² Haiko G van der Voort and others, 'Rationality and politics of algorithms. Will the promise of big data survive the dynamics of public decision making?' (2019) 36(1) *Government Information Quarterly* 27.

¹⁴³ Nicola Palladino, 'The role of epistemic communities in the "constitutionalization" of internet governance: The example of the European Commission High-Level Expert Group on Artificial Intelligence' (2021) 45(6) *Telecommunications policy* 102149.

¹⁴⁴ Michael Veale and Frederik Zuiderveen Borgesius, 'Demystifying the Draft EU Artificial Intelligence Act—Analysing the good, the bad, and the unclear elements of the proposed approach' (2021) 22(4) *Computer Law Review International* 97; Commission, 'Proposal for a Regulation of the European Parliament and of the Council laying down Harmonized Rules on Artificial Intelligence (Artificial Intelligence Act) and Amending Certain Union Legislative Acts' COM/2021/206 final.

¹⁴⁵ Deloitte, 'The Artificial Intelligence Act in a nutshell' (2021) <<https://www2.deloitte.com/content/dam/Deloitte/de/Documents/Innovation/Deloitte-TAI-DE-Artificial-Intelligence-Act.pdf>> accessed 8 August 2023.

hypernudging possibilities. In fact, most hypernudging is delivered by AI systems that according to the Act would be permitted subject to transparency obligations.

For instance, the AI Act imposes transparency obligations for AI systems that are intended to “interact with humans, are used to detect emotions or determine association with (social) categories based on biometric data or generate or manipulate content (‘deep fakes’)”.¹⁴⁶ Since hypernudging may require inferences about users’ emotional states, the provision is expected to minimise the specific risks of manipulation such AI systems pose by empowering people to make informed choices or allowing them to step back from a given situation.¹⁴⁷

The common thread focusing on increasing transparency is further observed with the DMA proposal, which imposes a number of transparency obligations on structurally important gatekeeping platforms that operate in digital advertising markets.¹⁴⁸ The provisions seem to respond to the growing concerns over the complex and opaque digital advertising market structure.¹⁴⁹ Some gatekeepers have become systemic actors present within each layer of the advertising value chain, with power to hypernudge users via ads across their many user-facing services and devices.¹⁵⁰

In line with the DMA, the DSA recognises that advertising may contribute to risks such as spread of harmful content and discriminatory treatment of consumers and citizens.¹⁵¹ The proposal attempts to tackle these risks by obliging online platforms that display advertising on their interfaces to ensure that recipients of ads would receive certain individualised information to contextualise the ads in relation to them.¹⁵² Article 30 of the DSA includes an additional obligation on the very large online platforms (VLOPs) to ensure public access to repositories of advertisements displayed on their online interfaces for a period of one year to facilitate supervision and research into emerging risks brought by distribution of advertising online, including hypernudging.¹⁵³

¹⁴⁶ Artificial Intelligence Act (n 144), 14.

¹⁴⁷ Ibid.

¹⁴⁸ Commission, ‘Proposal for a Regulation of the European Parliament and of the Council on contestable and fair markets in the digital sector (Digital Markets Act)’ (2020) COM/2020/842 final, article 5(g) and article 6(g).

¹⁴⁹ Competition and Markets Authority (CMA), ‘Online platforms and digital advertising. Market study final report’ (2020) <https://assets.publishing.service.gov.uk/media/5fa557668fa8f5788db46efc/Final_report_Digital_ALT_TEXT.pdf> accessed 8 August 2023; Damien Geradin and Dimitrios Katsifis, ‘An EU competition law analysis of online display advertising in the programmatic age’ (2019) 15(1) *European Competition Journal* 55.

¹⁵⁰ Morozovaite (n 11).

¹⁵¹ Digital Services Act (n 127).

¹⁵² Ibid, recital 52.

¹⁵³ Ibid; Paddy Leerssen, ‘Platform research access in Article 31 of the Digital Services Act. Sword without a shield?’ (*Verfassungsblog on matters constitutional*, 7 September 2021) <<https://verfassungsblog.de/power-dsa-dma-14/>> accessed 8 August 2023.

Finally, the DSA includes transparency obligations on VLOPs that use recommender systems. It recognises that “a core part of a [VLOP’s] business is the manner in which information is prioritized and presented on its online interface”.¹⁵⁴ Such information curation may be done by recommender systems that not only have a significant impact on the users’ ability to retrieve and interact with information online, but are also seen as amplifiers of certain messages, disseminators of viral content and stimulators of online behaviour, including hypernudging.¹⁵⁵ VLOPs are obliged to “set out in their terms and conditions, in a clear, accessible and comprehensible manner, the main parameters used in their recommender systems” as well as provide recipients of service with options to modify those main parameters, including at least one option not based on profiling.¹⁵⁶

Examining the approach adopted in the recent legislative initiatives vis-à-vis hypernudging is helpful in understanding the regulatory status quo and the lessons that can be drawn for problematising and addressing its harms in the future. A recurring theme includes a stronger emphasis on transparency obligations that fit within the individual empowerment paradigm discussed above. The limits of disclosure have been widely researched, thereby leading to doubts as to the effectiveness of the provisions. However, transparency serves a greater role in widening the responsibility of private actors that affect users’ fundamental rights.¹⁵⁷ It strengthens the observability of socio-technical systems that can be seamlessly harnessed to exploit user vulnerabilities, especially where such rights and duties did not exist before. Furthermore, the proposals highlight the policymaker’s awareness of digital platforms designing online environments in a way that can be used to push users towards choices that may not be in their best interests and lead to harms.¹⁵⁸

When it comes to hypernudging, it is in this context that the value of having a clear set of defining criteria to map out its different forms and accompanying harms becomes truly tangible. If adequately enforced, transparency obligations may be harnessed to increase the understanding of hypernudging in its multiple aspects, uncovering the shared “weaknesses” in digital choice architectures that allow for harmful hypernudging to occur.¹⁵⁹

¹⁵⁴ Digital Services Act (n 127), recital 62 and article 29.

¹⁵⁵ Ibid; Jesse and Jannach (n 58).

¹⁵⁶ Digital Services Act (n 127), article 29(1).

¹⁵⁷ Carl E Schneider and Omri Ben-Shahar, *More than you wanted to know: The failure of mandated disclosure* (Princeton University Press 2014); Giovanni de Gregorio, ‘Digital constitutionalism across the Atlantic’ (2022) 11(2) *Global Constitutionalism* 297.

¹⁵⁸ Helberger and others (n 126). For other relevant provisions see: Digital Markets Act (n 148), Article 6(d and j); Artificial Intelligence Act (n 144), article 5.

¹⁵⁹ Ugo Pagallo, ‘Good onlife governance: On law, spontaneous orders, and design’ in Luciano Floridi (ed), *The onlife manifesto: Being human in a hyperconnected era* (Springer 2015).

Finally, the AI Act, the DMA, and the DSA include a set of prohibitions on the sufficiently problematised digital market actors' behaviour.¹⁶⁰ This is important since the complex and opaque hypernudging processes and their multifaceted harms become more understood, the tolerance for them will depend on the prioritised values. Admittedly, the current attempts to strike a balance between users' fundamental rights and market values do not seem to boldly reshape the pre-existing divisions between the laws that regulate the market realm and the laws that deal with the public realm. The former remains guided by the need to fix market failures instead of shaping the digital market sphere in a way where public value is considered an end in itself.¹⁶¹ The AI Act, the DMA, and the DSA proposals aim to design a coherent legislative framework for the digital sector, addressing market and non-market effects while mostly keeping pre-existing divides intact. Thus, the fundamental dilemmas of how user-centric digital markets will be shaped are yet to be fully addressed.

5. Conclusion

A clear commitment to safeguarding citizens' interests is ever-more salient in the increasingly user-centric digital economy. With the emergence and development of data-driven business practices that centre around profiling and targeting users, concerns have been raised over their negative impact on the market and public spheres. At the heart of this article is hypernudging – dynamically personalised user steering, representing an elevation of online user targeting. It aims to influence user behaviour based on their characteristics and circumstances, leading to individual and collective harms.

This contribution has addressed the multifaceted hypernudging concept and highlighted the policymaker's dilemmas in problematising the phenomenon for effective policy responses. Hypernudging replicates and elevates the effects of harmful digital nudging practices, that have already entered the EU's consumer law and data protection discourses. However, the introduced piecemeal soft law instruments do not address the root causes of multifaceted harms stemming from user vulnerabilities embedded and exploited within the digital choice architectures. Finally, this article assessed hypernudging vis-a-vis the emerging European regulatory framework – the AI Act, the DMA, and the DSA. It showed that by placing more substantial transparency obligations on digital service providers, the new legal instruments are set to widen the responsibility of private actors and strengthen the observability of the covert socio-technical systems. In this context, a comprehensive hypernudging framework is necessary to allow identifying and assessing its harmful forms in practice.

¹⁶⁰ For instance: Digital Markets Act (n 148), article 5 (a, d, e, f).

¹⁶¹ Mazzucato and Ryan-Collins (n 125).

Since it is difficult to envision a single policy that would capture and affect different forms of hypernudging in the same way or address its challenges completely, identifying and addressing multifaceted harms requires consistent regulatory responses across domains that follow clear overarching priorities.¹⁶² Having a shared understanding of what impact hypernudging has on users, as well as crafting a shared vision of values that ought to be embedded and safeguarded in digital choice architectures, is an important pre-requisite in addressing the challenges. Arguably, this *shared* vision can only be achieved through collaborative multistakeholder efforts that involve the users from the beginning of the policymaking process.

¹⁶² Yuval Feldman, *The law of good people: Challenging states' ability to regulate human behavior* (Cambridge University Press 2018); Orla Lynskey and Peter Rott, 'A universal service framework for powerful online platforms' in Natali Helberger and others, 'EU consumer protection 2.0: Structural asymmetries in digital consumer markets' (Joint Report from EUCP2. 0 Project BEUC, 2021).



Chapter 3

Normative Underpinnings of European Competition Law

1. Introduction

Hypernudging processes represent the next evolutionary step in shaping users' experiences and influencing their behaviour online. In the context of the composite power of big technology companies, hypernudging can be perceived as one, among other, manifestations of power with effects reaching beyond the economic domain. The complexity and covertness of these phenomena pose multi-layered policy dilemmas that are just beginning to be understood and addressed by European regulators and policymakers.¹

This dissertation focuses on examining the role that European competition law *should* play in addressing the challenges of hypernudging by big technology companies. To answer the main research question, which is a prescriptive question, it is necessary to establish a normative framework which encompasses values that serve as benchmarks in making evaluative judgements about the law. For the purposes of this dissertation, the normative framework comprises of both internal and external framing of the law.² The former refers to the standards, values, and principles that are part of European competition law and requires tracing their normative basis from the positive law. In contrast, the latter provides the theories that underlie those standards, values and principles, as well as the policy aims competition rules serve within the EU legal system as a whole.³ Considering the multifaceted nature of hypernudging effects and tensions that arise between market and non-market values (as the chapter 6 will show), it is important to further consider how these values ought to be balanced in cases of conflict. This requires investigating the purpose these values serve in the context of the policy aims of the law.⁴

This chapter will outline the conceptual basis for the normative framework, by examining and justifying the key concepts needed to evaluate the role European competition law should play when it comes to harmful hypernudging by big technology companies. Against the background of the EU's constitutional set-up and its tenets of an open and democratic society, based on the rule of law, committed to safeguarding fundamental rights and public values, I have extrapolated two values that comprise the normative framework: (1) *autonomy*, as a cornerstone of freedom and (2) *equality* of market actors, including users. I focus on these two values because, firstly, they are connected to both the market logic of European competition law, which is part of the internal framing of the law, and the overarching EU constitutional set-up, which respectively is part of the external framing of the law. Furthermore, autonomy and

¹ See chapter 2, section 4.

² Sanne Taekema, 'Theoretical and normative frameworks for legal research: putting theory into practice' (2018) *Law and Method* 1.

³ *Ibid.*

⁴ *Ibid.*

equality are the values that are inherently at stake due to the nature of hypernudging, elaborated upon in chapter 2.

The first part of this chapter will describe the positive state of European competition law. In this regard, I examine the internal perspective and values that permeate European competition law enforcement and policy under the status quo (section 2). When it comes to further uncovering its normative underpinnings, the second part will assess the external framing of the law, by focusing on its socio-historical roots and the overarching EU's constitutional set-up (section 3). This contextual background will segue into the third part, which will explicate the chosen normative benchmarks for answering the main research question (section 4).

2. Internal Framing of European Competition Law

To assert the role that European competition law *ought to* play in addressing the multifaceted hypernudging phenomenon, it is firstly necessary to understand what the current state of the law *is* and how does hypernudging fit within this internal framework.

European competition law and policy have been part of the European project since its inception. The original wording of the provisions of the Treaty remained largely unchanged, but their interpretation evolved in line with the changing political and societal context, each phase of competition policy development leading to the reconsideration of its enforcement priorities and goals.⁵ For the present study, I describe three distinct phases of European competition law and policy:

1. The formative period (1950s - 1980s) characterised by the enactment of the Treaties and the formative case law. Note, in legal historical analyses this period is further divided into two separate parts relating to the negotiations of the Treaty and early enforcement of the rules.⁶ However, in this dissertation it is sufficient to underline the overarching themes, instead of delivering a fully-fledged legal historical analysis.
2. The modernisation period (since late 1990s) characterised by the adoption of the more economic approach, which favours economic efficiency-oriented understanding of competition and economic analyses of law.
3. The contemporary period (since 2010s) characterised by the challenges related to the digital transition, sustainability and global inequality.

⁵ Laurent Warlouzet, 'Towards a Fourth Paradigm in European Competition Policy? A Historical Perspective (1957–2023)' in Adina Claiaci, Assimakis Komninos and Denis Waelbroeck (eds), *The Transformation of EU Competition Law—Next Generation Issues*, (Kluwer 2023) 1.

⁶ Ibid; Anselm Küsters, *The Making and Unmaking of Ordoliberal Language. A Digital Conceptual History of European Competition Law* (doctoral thesis, University of Frankfurt, June 2022). Forthcoming in the series "Studien zur europäischen Rechtsgeschichte", published by Klostermann (2023).

In the following sub-sections, I briefly elaborate on each of these distinct phases to identify the intellectual bases that were instrumental in shaping the development of European competition policy. When it comes to the contemporary period, specifically the challenges related to the digitalisation of markets, I highlight the tensions that led the competition law community to submerge in the debate about fundamentals of the law. Hypernudging and its effects are a product of the digital transition. Ultimately, I ground the present study in European competition law, whilst emphasizing the importance of the changing societal context and showing that there may be a need to step outside the boundaries of the internal perspective of the law.

2.1. The Formative Period: Legal-Historical Background

The construction of the European single market can be traced back to the aftermath of World War II, when the EU started out as an international peace project that took the form of market integration through fostering economic inter-dependencies among Member States.⁷ The logic of the European integration followed economic considerations which resulted in opening up of national economies, anti-discrimination rules and strong commitment to undistorted competition.⁸

As a point of departure, it is important to note that competition rules formed an integral part in the European project since the beginning and has been explicated as one of the main activities necessary to achieve the objectives of the Union.⁹ Even though the Treaty of Lisbon transferred “undistorted competition” objective to the Protocol (No 27) on the Internal Market and Competition, the European Court of Justice (ECJ) affirmed that the substantive content of the Protocol together with the objective of establishing an internal market forms a constitutive part of Article 3(3) TEU.¹⁰

Against this backdrop, the promotion of market integration can be emphasized as one of the key initial objectives of the European project and competition policy.¹¹ This

⁷ Vicki L Birchfield, John Krige and Alisdair R Young, ‘European integration as a peace project’ (2017) 19(1) *The British Journal of Politics and International Relations* 3.

⁸ Fritz W Scharpf, ‘The double asymmetry of European integration: Or: why the EU cannot be a social market economy’ (2009) No. 09/12. MPIfG Working Paper, 6.

⁹ Treaty establishing the European Community (Consolidated Version 2002) (EC Treaty) [2002] OJ C 325, article 3(g); Wolf Sauter, ‘The economic constitution of the European Union’ (1998) 4 *Columbia Journal of European Law* 27, 53; Andrea Biondi, Piet Eeckhout and Stefanie Ripley (eds) *EU law after Lisbon* (Oxford University Press 2012), 348: “Contrary to a popular belief, competition policy was not included as one of the Community’s objectives in the text of the EC Treaty, but rather as one of the means of achieving such objectives”.

¹⁰ Ben van Rompuy, ‘The impact of the Lisbon treaty on EU competition law: a review of recent case law of the EU courts’ (2011) 1 *Competition Policy International Antitrust Chronicle* 1, 5.

¹¹ Specifically, see: EC Treaty (n 9), articles 2 and 3(1)(g); Eugene Buttigieg, *Comparative Law: Safeguarding the Consumer Interest. A Comparative Analysis of US Antitrust Law and EC Competition Law* (Kluwer Law International 2009) 47.

goal is unique to EU legal system and has been reflected in the case law, prominently in the early years of the Community.¹² In relation to article 102 TFEU, the *Guidance on the Commission's Enforcement Priorities in Applying Article 82 EC* not only stress the importance of a wider goal of achieving an integrated internal market, but also justifying intervention on the basis of exclusionary and exploitative conduct that threatens its proper functioning.¹³

The formative stages of the Community's economic and legal order, including competition policy, were a result of political compromise and influences that extend beyond a single set of theoretical ideas.¹⁴ The archival study that cross-examined European, French and German archives of the negotiations of the Treaty of Rome revealed that many actors played a part in shaping competition law provisions, with German ordoliberalists and French dirigists taking the lead.¹⁵ The US officials held less influence in the negotiations overall, but notably provided a source of inspiration through its antitrust experience and self-promotion.¹⁶ However, the institutional receptiveness to the US antitrust ideas is, at best, limited, as the Courts later showed cautiousness in importing foreign solutions in the formative judgements.¹⁷

¹² Laura Parret, 'Shouldn't we know what we are protecting? Yes, we should! A plea for a solid and comprehensive debate about the objectives of EU competition law and policy' (2010) 6(2) *European competition journal* 339, 346. For instance, see seminal: Joined cases 56 and 58-64 *Établissements Consten S.à.R.L. and Grundig-Verkaufs-GmbH v Commission of the European Economic Community* [1966] ECLI:EU:C:1966:41.

¹³ Commission, 'Guidance on the Commission's Enforcement Priorities in Applying Article 82 of the EC Treaty to Abusive Exclusionary Conduct by Dominant Undertakings' (Communication) OJ C 45/7, para 6-7.

¹⁴ For example, Warlouzet takes a historical perspective based on the evidence from the archives, in relation to the French dirigism and German Ordoliberalism. The documents support the conclusion that neither exclusively dominated European integration project, yet their influences are present in different European policies; German Ordoliberalism, for instance, was more prominent in formation of the competition policy and the European Monetary Union. See: Laurent Warlouzet, 'The EEC/EU as an evolving compromise between French dirigism and German Ordoliberalism (1957-1995)' (2019) 57(1) *Journal of Common Market Studies* 77, 90.

¹⁵ Ibid; Warlouzet (n 6), 7; Anselm Küsters, 'The Making and Unmaking of Ordoliberal Language: A Digital Conceptual History of European Competition Law' (2022) 15(2) *Erasmus Journal for Philosophy and Economics* 189; Massimo Vatiello, 'The ordoliberal notion of market power: an institutionalist reassessment' (2010) 6(3) *European Competition Journal* 689, 700; Josef Hien and Christian Joerges, 'Dead man walking? Current European interest in the ordoliberal tradition' (2018) 24(2-3) *European Law Journal* 142; Pinar Akman, 'The role of freedom in EU competition law' (2014) 34(2) *Legal Studies* 183.

¹⁶ Warlouzet (n 5), 4; Segers provides a historical account examining the influences from the US in the formation of the European Community. His conclusions support the idea the influence was present. See: Mathieu Segers, 'Eclipsing Atlantis: Trans-Atlantic Multilateralism in Trade and Monetary Affairs as a Pre-History to the Genesis of Social Market Europe' (1942-1950) (2019) 57 *Journal of Common Market Studies* 60.

¹⁷ Brigitte Leucht and Mel Marquis, 'American influences on EEC competition law: two paths, how much dependence?' in Kiran Patel and Heike Schweitzer (eds) *Historical Foundations of EU Competition Law* (Oxford University Press 2013).

The period between 1960s and 1980s can be considered as formative when it comes to European competition policy development and operationalisation in practice. The competition law provisions (currently: Article 101 TFEU and Article 102 TFEU) were drafted in a vague manner, not explicating methodological or procedural issues.¹⁸ According to Küsters' quantitative text analysis of the Commission's decisions and Court rulings in European competition law, the Ordoliberal language and ideas were particularly influential in this time.¹⁹

Ordoliberalism was founded by the economists and legal theorists associated with the "Freiburg School" in the interwar Germany.²⁰ Ordoliberal ideas are strongly concerned with the interactions and balancing of power in the private and public domain. Excessive power in either domain is perceived as dangerous because of the risk of degeneration of market and legal orders, as well as political capture.²¹ To Ordoliberals, the solution could be found in establishing a constitutional framework that would safeguard the process of competition from distortion by economic power and would allow for a minimal state intervention into the market.²² The State's intervention was limited to ensuring equality of opportunity and conditions for market actors to help themselves.²³ Thus, Ordoliberalism differs from laissez faire liberalism, which negates the positive role of the government in creating and protecting the appropriate rules and institutions to support the market mechanism.²⁴

Central to Ordoliberal value system is "economic freedom", which has its bounds defined by the authority of the State.²⁵ In this paradigm, competition is framed as: "a

¹⁸ Warloutzet (n 5), 9.

¹⁹ Küsters (n 6), 261.

²⁰ Karen Horn, 'Ordoliberalism: neither exclusively German nor an oddity. A review essay of Malte Dold's and Tim Krieger's Ordoliberalism and European Economic Policy: Between Realpolitik and Economic Utopia' (2022) 35(4) *The Review of Austrian Economics* 547.

²¹ Terence Hutchison, 'Ordoliberalism and the Social Market: Classical Political Economy from Germany' in Razeen Sally (ed) *Classical Liberalism and International Economic Order. Studies in Theory and Intellectual History* (Routledge 1998) 110. The emergence of Ordoliberalism and its foundations, including problematizing power in economic and political domains, should be viewed in the context of the Weimar Republic, which brought social and economic upheavals. See also: Josef Hien, 'The ordoliberalism that never was' (2013) 12(4) *Contemporary Political Theory* 349.

²² Vatiero (n 15), 700.

²³ Hien and Joerges (n 15), 149; Viktor J Vanberg, 'The Freiburg School: Walter Eucken and Ordoliberalism' (2004) *Freiburger Diskussionspapiere zur Ordnungsökonomik*, No.04/11, 7.

²⁴ Vanberg (n 23), 9.

²⁵ Hien and Joerges (n 15), 144: "The economic order as an order of private law constituted in terms of competition policy develops material freedom and social equality of opportunity from private autonomy and the system of legal transactions through the fundamental ideas of private law which are functionalized in terms of competition policy (freedom of contract, freedom to do business, freedom to own property)". See also: Werner Bonefeld, 'Freedom and the strong state: on German Ordoliberalism' (2012) 17(5) *New political economy* 633, 647-648; Nils Goldschmidt and Hermann Rauchenschwandtner, 'The Philosophy of Social Market Economy: Michel Foucault's Analysis of Ordoliberalism' (2018) 138(2) *Journal of Contextual Economics-Schmollers Jahrbuch* 157.

rule-based system that focuses on legal forms, accepts false positives, and is amenable to basic democratic decision-making regarding the framework rules, with the ultimate goals being the protection of consumer choice, political and competitive efficiency, and human freedom”.²⁶ Within this ideal, the nexus between economic freedom and political freedom is well established: the power of the State and the private economic power ought to be balanced, even if that balance may come at the expense of the efficiency of markets.²⁷ Thus, ordoliberals favoured the view that competition could also be used to protect political (restraint of interest groups) and social (small to medium-sized enterprise protection) efficiencies. As private power was not subject to readily accessible parliamentary control, the Commission and the Court were in a position to weigh any economic efficiencies against broader socio-political consequences of private power.²⁸

Coming back to the formative years of competition policy development in the EU, Ordoliberal language and preferences were echoed in the early cases, in the approach adopted to interpreting competition law provisions and the Court underlining the importance of “market structure”.²⁹ However, the early period also led to critique due to the application of formalistic analyses which created an unpredictability of the methods in determining and applying substantive norms of the law.³⁰ In addition, the centralisation of competition law enforcement placed a heavy procedural burden on the Commission. The change came in the late 1990s with the substantive and procedural modernisation, which situated economic analysis and decentralisation at the forefront of competition law enforcement.³¹

2.2. The Modernisation Period: More Economic Approach

Substantive modernisation led to the adoption of the more economic approach in the EU and had two main components: the apparent narrowing of the goals of European competition law to consumer welfare and giving prominence to the neo-classical economics’ methods of analysis.³² Consumer welfare provided a concrete, politically

²⁶ Küsters (n 15), 191.

²⁷ Nevertheless, this is a normative position. On critical perspective, see: Vanberg (n 23).

²⁸ Küsters (n 6), 296.

²⁹ *Ibid*, chapter VI. In this chapter, Küsters provides a historical account of the development of the conception of European competition law in 1950s and 1980s. He examines the ordoliberal language found in Commission’s rhetoric as well as several early judgements, such as *Geitling* (1962), *Consten and Grundig* (1966), *Continental Can* (1971) and *Commercial Solvents* (1974).

³⁰ Pablo Ibáñez Colomo and Andriani Kalintiri, “The evolution of EU antitrust policy: 1966–2017” (2020) 83(2) *The Modern Law Review* 321, 334; David J Gerber, ‘Two forms of modernization in European competition law’ (2008) *Fordham International Law Journal* 1235, 1246.

³¹ Gerber (n 30).

³² *Ibid*, 1247; Okeoghene Odudu, ‘The wider concerns of competition law’ (2010) 3(3) *Oxford Journal of Legal Studies* 599, 600.

attractive, standard to guide competition law enforcement.³³ The former Commissioner Mario Monti commented that the decision was driven partially by the need to delineate the scope of competition provisions.³⁴

The more economic approach is associated with the Chicago and post-Chicago school ideas that emerged in the US in the 1950s. The Chicago school of thought saw markets as self-correcting; it built on the premise that businesses tend to produce efficiency when governments do not intervene in the economy.³⁵ In this market efficiency model, efficiency refers to a “situation where the total gains experienced by the producers or consumers who gain outweigh the total losses experienced by the producers or consumers who lose”.³⁶ This formulation is reflective of the consumer welfare standard, which prioritises total aggregate welfare (combined consumer and producer welfare).³⁷

In the EU, consumer welfare is not a clearly defined concept and is generally understood in terms of economic efficiencies.³⁸ It entails maximising consumer rather than total (including producer) surplus, which refers to the difference between the sum of the consumers’ willingness to pay for a product or service and the sum of what they paid for it.³⁹ This places the intermediate and final consumers at the heart of competition policy in Europe and differentiates the EU’s approach from that taken in the US.⁴⁰

In light of the more economic approach, the success of competitive market is judged solely on its achievements related to welfare rather than promotion of individual

³³ Renato Nazzini, *The foundations of European Union competition law: the objective and principles of Article 102* (Oxford University Press, 2011) 45.

³⁴ Ariel Ezrachi, ‘EU competition law goals and the digital economy’ (2018) Oxford Legal Studies Research Paper No. 17/2018, 5.

³⁵ Eleanor M Fox, ‘The battle for the soul of antitrust’ (2018) 75(3) *California Law Review* 917, 917.

³⁶ Dzmityr Bartalevich, ‘The influence of the Chicago School on the Commission’s Guidelines, Notices and Block Exemption Regulations in EU Competition Policy’ (2016) 56(2) *Journal of Common Market Studies* 267, 270-271.

³⁷ This goes in line with Bork’s vision of antitrust law which must treat all members of society equally. As such, the goal of consumer welfare is considered as non-political. See: Gregory J Werden, ‘Essays on Consumer Welfare and Competition Policy’ (2009) 4 <<https://ssrn.com/abstract=1352032>> accessed 10 August 2023.

³⁸ Here, relevant are the notions of static efficiency, which encompasses allocative and productive efficiency, and dynamic efficiency, which is closely tied to the notion of innovation. Static and dynamic efficiencies are not, in themselves, considered to be objectives of competition. Instead, they are measures of how an objective, such as maximization of welfare, is pursued. For a discussion see: Nazzini (n 33); Parret (n 12), 349.

³⁹ Nazzini (n 33), 33.

⁴⁰ Ioannis Lianos, ‘Some reflections on the question of the goals of EU competition law’ in Ioannis Lianos and Damien Geradin (eds) *Handbook on European Competition Law: Substantive Analysis* (Edward Elgar Publishing, 2013); Victoria Daskalova, ‘Consumer Welfare in EU Competition Law: What Is It (Not) About?’ (2015) *Competition Law Review* 131, 144-145; Pinar Akman, ‘Consumer versus Customer: the Devil in the Detail’ (2010) 37(2) *Journal of Law and Society* 315; Svend Albaek, ‘Consumer welfare in EU competition policy’ in Caroline Heide-Jørgensen and others (eds) *Aims and values in competition law* (DJØF Publishing 2013).

freedoms.⁴¹ It is price, output, choice and quality that are perceived as the main parameters of competition.⁴² Nevertheless, there is a tension between the consumer welfare standard and other public values, with economists generally rejecting the incorporation of non-economic goals into competition policy and enforcement.⁴³

The consumer welfare standard has been adopted by the Commission and some national competition authorities.⁴⁴ Despite being the predominant European competition law enforcement standard, the Courts have not explicitly endorsed it as an overarching goal.⁴⁵ This is consistent with the fact that competition rules are not applied in isolation from other Union policies – the interpretation in the light of the Treaty’s objectives requires balancing these objectives against each other.⁴⁶

For instance, the importance of the context of the Treaty was confirmed in *TeliaSonera*, which stressed that the function of competition rules is to prevent competition from being distorted to the detriment of public interest, individual undertakings and consumers, thereby ensuring the well-being of the EU.⁴⁷ On numerous occasions, the Court has also referred to the primary aim of protecting effective competition structure or competition as such.⁴⁸

However, the Court does not negate the importance of economic reasoning in competition law cases. In *Post Danmark*, the Court for the first time referred to ‘consumer welfare’, also mentioning ‘price, choice, quality and innovation’, describing

⁴¹ Amartya Sen, *Rationality and Freedom* (2nd edn, Harvard University Press 2004) 502.

⁴² Kati Cseres, ‘The controversies of the consumer welfare standard’ (2007) 3(2) *The Competition Law Review* 121, 124.

⁴³ Anna Gerbrandy and Rutger Claassen, ‘Rethinking European Competition Law: From a Consumer Welfare to a Capability Approach’ (2016) 12(1) *Utrecht Law Review* 1, 2; Wolfgang Kerber, ‘Should competition law promote efficiency? Some reflections of an economist on the normative foundations of competition law’ in Josef Drexl, Laurence Idot and Joel Moneger (eds) *Economic theory of foundations of competition law* (Edward Elgar Publishing 2009) 93.

⁴⁴ Barbara E Baarsma, ‘Rewriting European competition law from an economic perspective’ (2011) 7(3) *European Competition Journal* 559, 561.

⁴⁵ Lianos (n 40); Anne C Witt, ‘Public policy goals under EU competition law – now is the time to set the house in order’ (2012) 8(3) *European Competition Journal* 443.

⁴⁶ Consolidated version of the Treaty on the Functioning of the European Union (TFEU) [2012] OJ C 326, article 7: “The Union shall ensure consistency between its policies and activities, taking all of its objectives into account and in accordance with the principle of conferral of powers.” See also: *Ibid.*

⁴⁷ C-52/09 *Konkurrensverket v TeliaSonera Sverige AB* ECLI:EU:C:2011:83, para 22.

⁴⁸ C-6/12 *Europemballage Corporation and Continental Company Inc. v. Commission of the European Communities (Continental Can)* [1973] ECLI:EU:C:1973:22, para 12; C-8/08 *T-Mobile Netherlands BV, KPN Mobile NV, Orange Nederland NV and Vodafone Libertel NV v Raad van bestuur van de Nederlandse Mededingingsautoriteit* [2009] ECLI:EU:C:2009:343, para 38; C-95/04 P *British Airways plc v Commission of the European Communities* [2006] ECLI:EU:C:2006:133, Opinion of AG Kokott, para 68.

the formulation of the standard that is generally endorsed by the Commission.⁴⁹ In addition, even in the early case law, economic analysis and vocabulary provided an aid when it came to, for instance, assessing the relevant factors apart from market shares in establishing a dominant market position.⁵⁰

The modernisation process created more certainty and seemingly painted the contours for European competition policy development.⁵¹ However, the tensions related to the goals of competition rules have not been fully resolved. After all, it is clear that competition rules are not based on a single set of ideas and instead evolved in line with the societal, ideological and institutional changes. The tensions are further illuminated by contemporary global challenges (e.g., digital transition, sustainability and global inequality), as the number of concerns related to public values stem from market power but are not perceived as problematic when assessed against the guiding market principles.

2.3. The Contemporary Period: Digitalisation of Markets

The argument of this dissertation is revealed against the background of the ongoing digital transition, which created new market dynamics and challenges to competition law enforcers around the globe.⁵² In the EU, the institutional shift in perspective has become more visible since mid-2010s, coinciding with Commissioner Vestager taking the lead of the Directorate-General for Competition.⁵³ The Commission's policy change regarding digital markets happened gradually, the digital sector-specific reports and policy documents providing the initial groundwork for identifying areas of tension.⁵⁴

⁴⁹ Daskalova (n 41), 133; C-209/10 *Post Danmark A/S v Konkurrencerådet* [2012] ECLI:EU:C:2012:172, paras 22 and 42.

⁵⁰ Anne-Lise Sibony, 'Limits of Imports from Economics into Competition Law' in Ionnis Lianos and Daniel Sokol (eds) *The Global Limits of Competition Law* (Stanford University Press 2012) 41.

⁵¹ Lianos (n 40).

⁵² 'Compendium of approaches to improving competition in digital markets (G7 United Kingdom 2021, 29 November 2021) 31-36 <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1044981/Compendium_of_approaches_to_improving_competition_in_digital_markets_publication.pdf> accessed 23 August 2023.

⁵³ Warloutet (n 5), 15. Around this time, the Neo-Brandeisian theory has been popularized by Lina Khan and Tim Wu in the US.

⁵⁴ Jacques Crémer, Yves-Alexandre De Montjoye, and Heike Schweitzer, 'Competition policy for the digital era' (Report for the European Commission, 2019) <<https://ec.europa.eu/competition/publications/reports/kd0419345enn.pdf>> accessed 10 August 2023; Jason Furman and others, 'Unlocking digital competition: Report of the digital competition expert panel' (UK government publication, HM Treasury, March 2019) <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/785547/unlocking_digital_competition_furman_review_web.pdf> accessed 10 August 2023; Autorité de la concurrence and Bundeskartellamt, 'Competition Law and Data' (Joint Study, 10 May 2016). <<https://www.autoritedelaconcurrence.fr/sites/default/files/Big%20Data%20Papier.pdf>> accessed 10 August 2023; Monopolkommission, 'Competition policy: The challenge of digital markets. Special Report No 68' (2015) <https://www.monopolkommission.de/images/PDF/SG/s68_fulltext_eng.pdf> accessed 10 August 2023.

Digital conglomeration and the changing digital markets' dynamics, including novel business models and modes of interaction with consumers, at the very least, challenged the application of traditional competition law tools, methodologies and theories of harm. For instance, due to the multi-sidedness of (some) digital platforms as well as interdependencies of services spanning across complex platform ecosystems, in particular those of big technology companies, it is becoming more difficult to define relevant markets and capture the full complexity of platform power. Traditional analytical tools, such as the SSNIP test, are less useful when applied to multi-sided and zero-price markets.⁵⁵ Market power in digital markets is further connected to user data, with biggest digital platforms possessing self-reinforcing data advantages because of network effects as well as “winner-takes-all” competition dynamics.⁵⁶

Moreover, as reflected in article 102 TFEU case law, the theories of harm for competition law enforcement predominantly focused on output and price-based parameters.⁵⁷ These parameters lend themselves to measurement, albeit not without complexity, and therefore provide a solid basis for justifying an intervention. However, digital output is relatively easy to produce and replicate.⁵⁸ In the context of zero-price markets, consumers also rarely pay a monetary price for digital products and services, requiring authorities to turn to alternative parameters of competition.⁵⁹

The above enforcement challenges, among others, were reflected in the creativity in the legal and economic analyses in a series of high-profile enforcement decisions against big technology companies.⁶⁰ The decisions were controversial, anchoring cases in less prominent theories of harm and placing stronger emphasis on quality and choice dimensions of competition.⁶¹

⁵⁵ Viktoria HSE Robertson, ‘Antitrust law and digital markets: a guide to the European competition law experience in the digital economy’ in Heinz D Kurz and others (eds), *The Routledge Handbook of Smart Technologies: An Economic and Social Perspective* (Routledge 2022), 8.

⁵⁶ *Ibid.*, 10.

⁵⁷ Crémer and others (n 54), 4; OECD, ‘Quality considerations in the zero-price economy – Note by the European Union’ (2018) 2 <[https://one.oecd.org/document/DAF/COMP/WD\(2018\)135/en/pdf](https://one.oecd.org/document/DAF/COMP/WD(2018)135/en/pdf)> accessed 23 August 2023.

⁵⁸ Crémer and others (n 54), 27.

⁵⁹ David S Evans, ‘The economics of attention markets’ (2020) <<https://ssrn.com/abstract=3044858>> accessed 10 August 2023; John M Newman, ‘Regulating Attention Markets’ (2020) University of Miami Legal Studies Research Paper.

⁶⁰ While outside the scope of this dissertation, other issues were considered in relation to article 101 TFEU and merger control. For an overview, see: Robertson (n 55).

⁶¹ Michelle Cini and Patryk Czulno, ‘Digital Single Market and the EU Competition Regime: An Explanation of Policy Change’ (2022) 44(1) *Journal of European Integration* 41, 42. For instance, see: *C-252/21 Meta Platforms Inc. v Bundeskartellamt* [2023] ECLI:EU:C:2023:537; T-612/17 *Google and Alphabet v Commission (Google Shopping)* [2021] ECLI:EU:T:2021:763; Case T-604/18 *Google and Alphabet v Commission (Google Android)* [2022] ECLI:EU:T:2022:541.

By June 2020, the Commission started to explore the possibility for the New Competition Tool (NTC), which would allow it to investigate structural competition issues across markets.⁶² After public consultation, the NTC was replaced with the legislative proposal for the DMA, aimed at addressing unilateral conduct of digital platforms with a status of “gatekeeper”. The DMA was enacted into law in September 2022 and contains a number of prohibitions and obligations for gatekeepers, which were heavily inspired by competition law investigations into digital markets.⁶³

In addition to the digital sector-specific regulation, the Commission launched the revisions of the *Notice on the Definition of Relevant Market for the Purposes of Community Competition Law (1997)*,⁶⁴ and of the *Guidance on the Commission’s Enforcement Priorities in Applying Article 82 of the EC Treaty to Exclusionary Conduct by Dominant Undertakings (2008)*.⁶⁵ Notably, the latter led to a publication in which the Commission for the first time explicated that competition can “contribute to objectives that go beyond consumer welfare, such as plurality in a democratic society”.⁶⁶ It is unclear how the Commission envisioned the contribution to other objectives to operationalise, but the expression of intention signifies a shift from a predominant economic efficiencies-based interpretation of competition law. It also underscores the revived debate as to the goals of European competition law and its boundaries.⁶⁷

Ultimately, the features and dynamics of digital markets led to a prolific debate concerning the flexibility of existing concepts and tools, as well as increased interest

⁶² Commission, ‘Single Market – new complementary tool to strengthen competition enforcement’ <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12416-Single-Market-new-complementary-tool-to-strengthen-competition-enforcement_en> accessed 23 August 2023.

⁶³ Alexandre de Stree and others, ‘Enforcing the Digital Markets Act: Institutional Choices, Compliance, and Antitrust’ (2022) *Compliance and Antitrust* 1, 17.

⁶⁴ Commission, ‘Review of the Commission Notice on the definition of relevant market for the purposes of Community competition law’ (Public Consultations) <https://competition-policy.ec.europa.eu/public-consultations/2022-market-definition-notice_en> accessed 10 August 2023.

⁶⁵ Commission, ‘EU competition law – guidelines on exclusionary abuses by dominant undertakings’ (Published initiatives) <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13796-EU-competition-law-guidelines-on-exclusionary-abuses-by-dominant-undertakings_en> accessed 10 August 2023.

⁶⁶ Amendments to the Communication from the Commission Guidance on the Commission’s enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings (Communication) C(2023) 1923 final, 1 <https://competition-policy.ec.europa.eu/system/files/2023-03/20230327_amending_communication_art_102_0.pdf> accessed 8 August 2023.

⁶⁷ Among others, see: Ezrachi (n 34); Anna Gerbrandy, ‘Rethinking competition law within the European economic constitution’ (2019) 57(1) *Journal of Common Market Studies* 127; Douglas A Melamed and Nicolas Petit, ‘The misguided assault on the consumer welfare standard in the age of platform markets’ (2019) 54 *Review of Industrial Organization* 741; for an overview on the perspectives on the goals of European competition law see: Konstantinos Stylianou and Marios Iacovides, ‘The goals of EU competition law: a comprehensive empirical investigation’ (2022) 42(4) *Legal Studies* 620.

in revisiting the goals of European competition law altogether. Adjusting and reshaping the interpretation of competition law would not be a revolutionary step, as this chapter demonstrated so far, the changing political and institutional circumstances trigger change. As will be further shown in section 3.2., the question of whether competition policy and goals should stick to the dominant economic efficiency-oriented interpretation has to be assessed in the broader EU's digital policy agenda and normative commitments made towards materialising innovative, yet fair, safe and trustworthy digital economy.

2.4. European Competition Law Grounding for the Study of Hypernudging

Hypernudging is part of the parcel of the contemporary challenges brought by the digital transition. When distilling the connection between hypernudging and European competition law, it is important to highlight that hypernudging processes take various forms and manifest in different, sometimes overlapping, domains. As a result, the potential harms of hypernudging are manifold, with users experiencing its effects in economic, political, social, and private domains.

For the purposes of the present study, it is important to note several aspects related to the limitations of European competition law in its more economic approach interpretation. Firstly, theories of harm in article 102 TFEU enforcement context relate to consumers in the aggregate, and direct consumer harm is examined only in relation to exploitative abuses, which have not been considered an enforcement priority.⁶⁸ Practices impacting individual consumers, as such, have been traditionally alienated from competition law's remit. In this regard, European consumer law has become a prominent legal field in addressing emerging challenges of user influencing, since it deals with the protection of rights and interests of consumers in the EU's internal market, by ensuring that consumers have access to accurate information, safe products and fair and transparent market practices.⁶⁹

When it comes to hypernudging, this aspect is particularly contentious in relation to the application of European competition law since, by its nature, hypernudging refers to hyper-personalised practices that target consumers on a psychological level. Nevertheless, as already elaborated in previous chapters, hypernudging can be deployed in a large-scale systemic manner leading to collective harms, such as distortion of (downstream) markets. Chapters 4, 5 and 6 explore the hypernudging and competition law connection through examples, which broadly recognise that in the

⁶⁸ Guidance on the Commission's Enforcement Priorities (n 13).

⁶⁹ Kati Cseres, *Competition Law and Consumer Protection* (Kluwer Law International BV 2005).

increasingly hyper-personalised digital economy, individual and collective harms can exist concomitantly, necessitating regulatory responses that not only protect individual rights but also target market structure and the very architecture of digital platforms.

Secondly, European competition law as a solution to the negative manifestations of market power cannot be viewed in isolation from the broader digital policy and regulatory developments in the EU. As noted in chapters 1 and 2, coinciding with the growing research and evidence about the prevalence and harms of user influencing online, there has been a surge of legislative initiatives aimed to address them. Inherently, new legal instruments provide plausible legal avenues for intervention and *de facto* impose limits on when and where competition law should be enforced. Furthermore, the relationship between the sector-specific DMA and competition law is currently a contentious subject.⁷⁰ Nevertheless, considering that in the EU competition law and regulation are seen more as complements than substitutes, and taking stock of lessons from enforcement in other regulated sectors, such as telecoms, it is clear that European competition law remains a compelling instrument to address market distortions.

Finally, even if competition law can be used to address hypernudging harms to consumer welfare, further critical inquiry is necessary regarding the questions about hypernudging harms that extend beyond the economic domain. In light of the current competition law interpretation based on the neo-classical economics intellectual basis, the balancing of non-market values is challenging and may lead to a clash with efficiency perspective. This has become particularly apparent in view of contemporary challenges. To exemplify, horizontal sustainability agreements have been a subject of contention in regard to article 101 (3) TFEU, which outlines the exception to finding competition law infringement.⁷¹ Despite the slow progress towards acceptance of sustainability as a value to be protected in the market realm, the Commission's draft guidance of Horizontal Block Exemption Regulations is committed to encompassing

⁷⁰ Oles Andriychuk, 'Shifting the digital paradigm: towards a sui generis competition policy' (2022) 46 *Computer Law and Security Review* 105733; Assimakis Komninos, 'The Digital Markets Act: how does it compare with competition law?' (2022) <<https://ssrn.com/abstract=4136146>> accessed 8 August 2023; Pierre Larouche and Alexandre de Streel, 'The European Digital Markets Act: A revolution grounded on traditions' (2021) 12(7) *Journal of European Competition Law & Practice* 542; Henrique Schneider, 'Digital Markets Act: Regulating Competition Regardless of Effects' in Jean-Pierre Bringham and others (eds) *Jahre Kartellgesetz – ein kritischer Ausblick* (EIZ Publishing 2022).

⁷¹ In this regard, the example of the Dutch cases Kip van Morgen and Energie Akkoord. See: Autoriteit Consument & Markt, 'Afspraken Kip van Morgen beperken concurrentie' (2015) <<https://www.acm.nl/nl/publicaties/publicatie/13760/Afspraken-Kip-van-Morgen-beperken-concurrentie>> accessed 8 August 2023; Autoriteit Consument & Markt, 'Notitie ACM over sluiting 5 kolencentrales in SER Energieakkoord' (2013) <<https://www.acm.nl/nl/publicaties/publicatie/12033/Notitie-ACM-over-sluiting-5-kolencentrales-in-SER-Energieakkoord>> accessed 8 August 2023.

it.⁷² The changes, however, would not change the position in relation to Commission's enforcement priorities and consumer welfare standard of European competition law.

Considering non-economic interests in the context of article 102 TFEU, which is the relevant legal provision for this dissertation, provides additional conceptual and practical obstacles. This is because in contrast to broadening the *exception* to the rule, extending article 102 TFEU enforcement beyond purely economic interests would require broadening of the *prohibition* of abuse of dominance. As a result, incorporating any non-market interests requires a solid justification and clear boundaries that would not substantially inhibit the legal certainty for market actors. Interrogating the boundaries of European competition law is the ultimate aim of this research, as well as the overarching "Modern Bigness" ERC Starting Grant project.

3. External Framing of European Competition Law

Since the adoption of the more economic approach, European competition policy has largely been perceived as a purely economic policy.⁷³ Nevertheless, a closer look into the internal framing of the law reveals a fragmented nature and uncertainties concerning its goals, especially in light of the ongoing enforcement challenges raised by the digital transition. European competition law, however, does not exist in a vacuum – as any legal discipline, it derives its validity from the evolving societal norms that underlie the foundations and values of EU legal system.⁷⁴ To meaningfully answer the main research question, therefore, it is helpful to take a step further in uncovering the normative underpinnings of European competition law by assessing its external framing, which encompasses the normative theories and values that underpin the EU legal system. This process requires adopting a legal-historical lens and shedding light to the abstract concepts that are foundational to the Community's legal order.

The external framing of European competition law mirrors some of the steps taken in examining the internal framing, highlighting their interwovenness and connections between different values and concepts. In regard to the digital transition, it is shown that it constitutes a moment in time where societal norms and the EU's normative commitments are shifting, adding a push for the reconsideration of how competition policy can be shaped to support the co-creation of digital markets where economy and society work in concert. As such, the discussion is normative in character. This section,

⁷² Commission, 'Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements (Communication) OJ C 164/1.

⁷³ Conor Talbot, 'Ordoliberalism and balancing competition goals in the development of the European Union' (2016) 61(2) *The Antitrust Bulletin* 264, 287.

⁷⁴ Ariel Ezrachi, 'Sponge' (2017) 5(1) *Journal of Antitrust Enforcement* 49, 51; TFEU (n 47), article 7; Buttigieg (n 12), 47; Anca D Chirita, 'A legal historical review of the EU competition rules' (2014) 63 *International & Comparative Law Quarterly* 281, 282.

therefore, provides the conceptual basis for extrapolating the values - *autonomy*, as a cornerstone of *freedom*, and *equality* - that comprise the normative framework in the present study.

3.1. Economic Freedom within the European Economic Constitution

The EU is based on the basic tenets of liberal democracy and the rule of law and is committed to safeguarding civil liberties and human rights through a strong legal framework.⁷⁵ Its unique supranational legal order does not contain a written constitution in a classical sense of a nation-state.⁷⁶ Instead, the founding principles of the Union are contained in the Treaties. The Court is responsible for interpretation of the Treaties and has played a constitutionalising role, especially in the formative years of the European project.⁷⁷ For instance, one of the first moves of the ECJ was to establish Community law as an autonomous legal system, through the principles of supremacy and direct effect.⁷⁸ The Court has also been instrumental in constitutionalising the idea of market freedom, through a series of seminal cases.⁷⁹

The EU's constitutionalisation discourse began with the economic dimension.⁸⁰ The European economic constitution formed the core of the European Economic Community's legal order, comprising of market freedoms, competition law and, after the Maastricht Treaty of 1992, the European Monetary Union. However, neither the

⁷⁵ Consolidated Version of the Treaty on European Union (TEU) [2012] OJ C 326/13, article 2 provides the foundational core of the EU: "The Union is founded on the values of respect for human dignity, freedom, democracy, equality, the rule of law and respect for human rights, including the rights of persons belonging to minorities. These values are common to the Member States in a society in which pluralism, non-discrimination, tolerance, justice, solidarity and equality between women and men prevail"; Alberto Pera, 'Changing views of competition, economic analysis and EC antitrust law' (2008) *European Competition Journal* 127, 130.

⁷⁶ Despite a failed attempt to have a European constitutional treaty. This perhaps also distinguishes the EU from federal states such as the US or Germany.

⁷⁷ For instance, among others, Case 26-62 *NV Algemene Transport- en Expeditie Onderneming van Gend & Loos v Netherlands Inland Revenue Administration* [1963] ECLI:EU:C:1963:1 (direct effect); Case 6/64 *Flaminio Costa v E.N.E.L.* [1964] ECLI:EU:C:1964:66 (primacy of Community law); Case 120-78 *Rewe-Zentral AG v Bundesmonopolverwaltung für Branntwein* [1979] ECLI:EU:C:1979:42 (measures having an equivalent effect).

⁷⁸ Miguel Poirares Maduro, *We the Court: the European Court of Justice and the European Economic Constitution. A critical reading of Article 30 of the EC Treaty* (Hart Publishing 1998) 7.

⁷⁹ *Rewe-Zentral AG v Bundesmonopolverwaltung für Branntwein* (n 74); C-167/01 *Kamer van Koophandel en Fabrieken voor Amsterdam v Inspire Art Ltd* [2003] ECLI:EU:C:2003:512; C-438/05 *International Transport Workers' Federation and Finnish Seamen's Union v Viking Line ABP and OÜ Viking Line Eesti* [2007] ECR 2007 I-10779; Case C-341/05 *Laval un Partneri Ltd v Svenska Byggnadsarbetareförbundet, Svenska Byggnadsarbetareförbundets avdelning 1, Byggettan and Svenska Elektrikerförbundet* [2007] ECLI:EU:C:2007:809.

⁸⁰ Kaarlo H Tuori, 'The Economic Constitution Among European Constitutions' (2011) Helsinki Legal Studies Research Paper No.6, 2.

internal market nor competition policy constituted the overarching Community's goals - they were the instruments for achieving the primary integration objectives.⁸¹

The notion of the European economic constitution can generally be understood as a combination of foundational principles and norms that govern the rights and obligations of both governments and economic actors in the (European) economic sphere and is enshrined by the Treaties.⁸² The European project as such rested on an attempt to impose a stable legal framework on the post-war European economy, which would be respected by the political system, and ultimately foster peace in the region.⁸³ It was established on the basis of functional separation of powers, where the Community was granted limited competences for the establishment of the common market to overcome economic nationalism.⁸⁴

In the broadest sense, an economic constitution can be viewed through the lens of political choices determining the order of the economy of a specific society.⁸⁵ The Community law made a systemic political choice in favour of an open market economy and free competition, later underlining an additional social responsibility.⁸⁶ This choice substantively implies the functional conditions of a competition-controlled market economy, necessitating “economic freedom, the co-ordination of supply and demand in competition, and free entry and exit from the market”.⁸⁷

European competition policy in a market economy is important in securing the freedom to compete and protecting individual liberty granted by the EU's private law order.⁸⁸ In this regard, the European economic constitution can be viewed as establishing the contours of how the economic system should be organised - “the rules of the game” - and within those contours, market agents are free to exercise their private autonomy and choice.⁸⁹ Economic freedom, therefore, is a built-in feature within the European economic constitution, underpinning the normative grounding of the European competition law. In order to move closer to presenting a sound account of the normative foundations of the European competition law, however, it is necessary to

⁸¹ Armin Hatje, ‘The economic constitution within the internal market’ in Armin von Bogdandy and Jürgen Bast (eds) *Principles of European Constitutional Law* (Bloomsbury Publishing 2010) 593.

⁸² Gerbrandt (n 67), 128.

⁸³ Ioannis Kampourakis, ‘Bound by the Economic Constitution: Notes for “Law and Political Economy” in Europe’ (2021) 1(2) *Journal of Law and Political Economy* 301, 306.

⁸⁴ Hans-Wolfgang Micklitz, ‘Society, private law and economic constitution in the EU’ in Guillaume Gregoire and Xavier Miny (eds) *The Idea of Economic Constitution in Europe* (Brill 2022).

⁸⁵ Hatje (n 81), 591. Brigitte Leucht, ‘The policy origins of the European economic constitution’ (2018) 24(2-3) *European Law Journal* 191.

⁸⁶ Hatje (n 81), 594. See also: EC Treaty (n 10), articles 4(1) and 98; TEU (n 75), article 3(3).

⁸⁷ *Ibid.*, 595.

⁸⁸ Vanberg (n 23), 10.

⁸⁹ *Ibid.*, 9.

interrogate the conception of “economic freedom” as well as its limits further, whilst positioning them in the context of the changing European legal order.

3.1.1. Conceptualising Economic Freedom

The notion of freedom is not a consensually agreed upon concept and can hold different meanings in the context that it appears. From a legal perspective, a distinction can be made between “positive” and “negative” freedoms. Positive freedom allows overcoming the barriers that come from within the person; it allows an individual to develop their own potentiality. According to Sen’s formulation, positive freedom can be valued in relation to the real, “substantive opportunity” it provides in the pursuit of our goals.⁹⁰ Negative freedom, on the other hand, is a freedom from different types of external interference, it focuses on the process of exercising freedom itself.⁹¹ Thus, an individual is viewed to possess the decisional autonomy over their choices, as well as immunity from interference in expressing their decisions.⁹²

Economic freedom refers to freedom in the market domain. In a positive sense, it establishes market actors’ rights to participate in the market and develop own potential in the free market environment. When it comes to the negative economic freedom, it also provides market actors with the right from interference to the market opportunities that result from anticompetitive behaviour.⁹³ Closely tied to economic freedom is freedom of choice in the economic domain. The concept is familiar to European competition law and refers to the freedom to choose one’s trading partners, be it as business customers or end consumers.⁹⁴ In this regard, undertakings are free to determine their own business strategies. It is based on the premise that in a free market economy, market agents should have equal opportunities to benefit from the market.⁹⁵ Furthermore, while consumers are not entitled to a specific level of choices, they should be presented with an array of options that result from the unhindered operation of the free market.⁹⁶

In the context of the European economic constitution, economic freedom has its bounds. After all, in its extremes, even values such as freedom can be abused. The

⁹⁰ Sen (n 41), 508.

⁹¹ Isaiah Berlin, *Four essays on liberty* (Oxford University Press 1969); Nazzini (n 34), 20.

⁹² Sen (n 41), 10.

⁹³ Nazzini (n 33), 21.

⁹⁴ Akman (n 15), 196; Paul Nihoul, ‘Freedom of choice: the emergence of a powerful concept in European Competition Law’ (2012) 1-2 <<https://ssrn.com/abstract=2077694>> accessed 10 August 2023.

⁹⁵ Nazzini (n 33), 21.

⁹⁶ Robert H Lande, ‘Resurrecting Incipency: from Von’s Grocery to Consumer Choice’ (2001) 68(3) *Antitrust Law Journal* 875, 890-891.

tension has been depicted in Popper's "paradox of freedom": absolute freedom leads to oppression.⁹⁷ In other words, would the state grant absolute freedom to the ones restricting competition, it would allow endangerment of economic freedom of other market agents.⁹⁸ In the EU, economic freedom is limited by the legitimate public interest goals, which may justify the exceptions from market principles in very specific circumstances, subject to judicial review.⁹⁹

Since competition law forms an integral part of the European economic constitution, it is inexorably linked with the economic freedom. However, free markets are not equivalent to competitive markets. While competition is an integral component of the definition of economic freedom, the role of economic freedom in competition policy and enforcement is less defined; some argue it does not have to be a constituent element of the definition of competition.¹⁰⁰ This is also reflected in the contemporary competition law enforcement direction. The consumer welfare standard is based on different normative values and pursues different goals than economic freedom.¹⁰¹ This is because consumer welfare is a form of utilitarianism, with economic efficiency and economic growth being its key underlying values.¹⁰² In contrast, economic freedom is closer to the rights-based approach and is connected to social justice and civil liberties.¹⁰³

Nevertheless, the Courts have referred to "economic freedom"¹⁰⁴ and its variations, such as "freedom of competition",¹⁰⁵ "freedom to compete",¹⁰⁶ "freedom to choose" and "freedom of choice"¹⁰⁷ in competition law cases. Against the background of the central role competition law undertakes in the European economic legal framework, it appears that despite its attractiveness as a standard of enforcement, consumer welfare

⁹⁷ Bastiaan Rijpkema, 'Popper's paradox of democracy' (2012) 11(32) *Think* 93.

⁹⁸ Joseph Drexl, 'Competition law as part of the European constitution' in Armin von Bogdandy and Jürgen Bast (eds) *Principles of European Constitutional Law* (Bloomsbury Publishing 2010) 660; Karl R Popper, *The Open Society and its Enemies: The Spell of Plato* Vol.1 (Princeton University Press 1971), chapter 7.

⁹⁹ Sauter (n 9), 42.

¹⁰⁰ Nazzini (n 33), 20.

¹⁰¹ Akman (n 15), 185. Akman discusses the difference: "A finding that 'freedom' is to be protected as such (...) implies focusing on the process of competition, which also involves the structure of competition, whereas a consumer welfare objective would imply focusing on the outcome of the process of competition as the ultimate benchmark."

¹⁰² Liza Lovdahl Gormsen, 'The conflict between economic freedom and consumer welfare in the modernization of Article 82 EC' (2007) *European Competition Journal* 329, 329-330.

¹⁰³ *Ibid*, 335.

¹⁰⁴ Case T-201/04 *Microsoft Corp. v Commission of the European Communities* [2007] ECLI:EU:T:2007:289, para 646.

¹⁰⁵ Joined cases 56 and 58-64 *Établissements Consten S.à.R.L. and Grundig-Verkaufs-GmbH v Commission of the European Economic Community* [1966] ECLI:EU:C:1966:41, para 339.

¹⁰⁶ Akman (n 15), 184.

¹⁰⁷ T-228/97 *Irish Sugar plc v Commission of the European Communities* [1999] ECLI:EU:T:1999:246, para 6 and 9.

and, relatedly, economic efficiency, cannot be the ultimate, or at least only, answer to the normative underpinnings of the European competition law.¹⁰⁸

3.1.2. The Socio-Political Dimension of the EU's Market Economy vis-à-vis Competition Law

With the enactment of the Treaty of Lisbon, the EU has explicitly adopted a “highly competitive social market economy” goal by which the Union inherently and simultaneously pursues economic and social objectives.¹⁰⁹ The ideal of a social market economy is intertwined with the Ordoliberal program, but Müller-Armack, who coined the term, has explicitly distinguished his own position.¹¹⁰ He described the social market economy to encompass “market freedoms that are capable of achieving social objectives”.¹¹¹ The most common of such objectives includes the limitation of social inequality and correcting market failures.¹¹² The appeal of institutionalisation of the social market economy in the EU was related to the desire to develop and extend policies of social balance.¹¹³ This new direction was reflected in the Lisbon Strategy, Europe 2020 Strategy and the social investment discourse.¹¹⁴ However, the aftermath of the 2008 economic crisis highlighted a slow embrace of this aim by the policymakers.¹¹⁵

In the social market economy model, the private law order is presupposed to delineate and protect private domains within which market agents are free to choose and to enter into voluntary contracts with each other, whilst allowing for incorporation of

¹⁰⁸ Joseph William Singer, ‘Normative Methods for Lawyers’ (2009) 56 *UCLA Law Review* 899, 916-921. “Efficiency analysis is attractive because it takes individual preferences for granted (thereby promoting individual autonomy), counts each person’s interests equally (thereby promoting equal concern and respect for human beings), and uses math – the most objective procedure imaginable – to figure out how to maximize human welfare.”

¹⁰⁹ TEU (n 75), article 3(3); Anna Gerbrandy, Willem Janssen and Lyndsey Thomsin, ‘Shaping the social market economy after the Lisbon Treaty: How ‘Social’ is public economic law?’ (2019) 15(2) *Utrecht Law Review* 32; Vatiéro (n 15), 689; Hugo Canihac and Francesco Laruffa, ‘From an Ordoliberal idea to a social-democratic ideal? The European Parliament and the institutionalization of social market economy in the European Union (1957-2007)’ (2022) 60(4) *Journal of Common Market Studies* 867.

¹¹⁰ Christian Joerges and Florian Rödl, ‘Social market economy as Europe’s Social Model’ (2004) EUI Working Paper LAW No.2004/8, 14 <<https://ssrn.com/abstract=635362>> accessed 10 August 2023.

¹¹¹ Charles Edward O’Sullivan, ‘The EU market state ideals and social market economy objectives: placing the social market economy within the Union’s constitutional history’ in Charles Edward O’Sullivan (ed) *The EU Social Market Economy and the Law* (Routledge 2018) 18.

¹¹² *Ibid.*, 18; Joerges and Rödl (n 110), 12; Stefano Civitarese Matteucci, ‘Social rights, social market economy and the European social model: tracing conceptual boundaries’ in Charles Edward O’Sullivan (ed) *The EU Social Market Economy and the Law* (Routledge 2018) 51.

¹¹³ Joerges and Rödl (n 110), 20.

¹¹⁴ Canihac and Laruffa (n 109), 879.

¹¹⁵ Jotte Mulder, ‘(Re) Conceptualizing a social market economy for the EU internal market’ (2019) 15(2) *Utrecht Law Review* 16.

social objectives that ought to be pursued simultaneously with economic goals.¹¹⁶ The nature of competition in this model is not undisputed. Some commentators argue that competition policy was not meaningfully affected by the change in the Treaty, while others see room for nuanced incorporation of non-economic goals.¹¹⁷

The question arises what is meant by “social” in the EU’s market economy, and whether it imposes limits to economic freedom, especially in cases of conflict. In answering these questions, it is important to acknowledge that the social constitutional dimension of the EU has traditionally played a relatively weak role. This is because Member States have primarily retained the competences for social policies, unlike the economic ones.¹¹⁸ The social objectives remained perceived as political and nationally bound.¹¹⁹ From a historical perspective, the “social” has slowly permeated the Union’s agenda through the exercise of market freedoms. For instance, the process of negative integration was instrumental in expanding individual rights too, since the exercise of the four freedoms necessitated guarantees of the social rights of migrant workers and enhanced gender equality workplace-oriented regime.¹²⁰ By the same token, social progress was perceived as a consequence of increased prosperity as a result of a strong European economy.¹²¹

It is not generally evident that non-economic and social goals should be placed above “economic freedom”.¹²² As has been discussed above, a number of contemporary challenges, including the digital transition, highlight tensions and choices to be made between prioritising market and public values. These choices carry a political dimension – they are not merely a result of the evolving societal norms, but also concern deliberate political decisions that reflect policy objectives, values and ideologies as to how the economy, the state and society function and co-exist together. The hints as to the Union’s response to this quandary comes from identifying what kind of society the EU is striving towards.

The highly competitive social market economy can be viewed as a basis of the Union, with its fundamental values, embedded in Article 2 TEU, aiding in forming the vision for that social market economy’s implementation. These values, accordingly, can be separated into “a group of fundamental rights and the group of sovereignties. The group of fundamental rights comprises the respect for human rights – in particular the rights of minorities – human dignity, freedom and equality (...). The other group

¹¹⁶ Vanberg (n 23), 10; Gerbrandy, Janssen and Thomsin, (n 109).

¹¹⁷ Gerbrandy, Janssen and Thomsin, (n 109); Joerges and Rödl (n 110); Scharpf, (n 8).

¹¹⁸ O’Sullivan (n 111), 22.

¹¹⁹ Mulder (n 115).

¹²⁰ Kampourakis (n 83), 307; O’Sullivan (n 111), 24.

¹²¹ Tuori (n 80), 34.

¹²² Vanberg (n 23).

comprises people's sovereignty under the term of democracy and (...) the rule of law".¹²³ Furthermore, linked to the social market economy is the aim of promoting the "well-being of its [Union's] peoples".¹²⁴ As such, the declaration of the Union's values in the Treaty have been perceived as fostering the European citizens' identity.¹²⁵

From a normative perspective, the EU identifies as an open and democratic society, based on the rule of law, respecting fundamental rights and public values. Relevant here is the ideal of an open society, which was constructed by Popper in relation to a closed society.¹²⁶ In his formulation, "the magical or tribal or collectivist society will also be called the closed society, and the society in which individuals are confronted with personal decisions, the open society".¹²⁷ In this conception, closed and totalitarian societies are synonymous. In contrast, open societies are characterised by individual autonomy, freedom, equality (of opportunity) and unalienable rights of citizens, which deserve respect and provide the basis for legitimate exercise of public power.¹²⁸ Democratic institutions play a critical role in open societies by providing a framework for representation and voice to all citizens, accountability mechanisms and protection of individual rights and freedoms.¹²⁹ For the purposes of this dissertation and its European competition law focus, important is the socio-economic perspective, according to which in open societies the legal system establishes the markets as a system of economic order as well as provides socio-economic rights as equalisers.¹³⁰ In this perspective, the overlap of the notions of "open society" and "social market economy" is evident, but they nevertheless retain their conceptual distinctiveness.¹³¹

¹²³ Timea Drinoczi, 'Some elements of the Economic Constitution of the EU: Social market economy and relevant fundamental rights' (2018) *International Law Yearbook 2017-2018* 3, 25-26.

¹²⁴ TEU (n 75), article 3(1).

¹²⁵ Armin von Bogdandy, 'The European Constitution and European Identity: Text and Subtext of the Treaty Establishing a Constitution for Europe' (2005) 3 *International Journal of Constitutional Law* 295, 307.

¹²⁶ Donrich W Jordaan, 'The open society: what does it really mean?' (2017) 50(2) *De Jure Law Journal* 1, 1.

¹²⁷ Karl R Popper, *Open Society and its Enemies. Golden Jubilee Edition* (Routledge 1995), 173. Note, Henri Bergson was the first to introduce the term "open society", but Karl Popper is most associated with developing the concept. See: Henri Bergson and William H Carter, *The two sources of morality and religion* (Doubleday 1935).

¹²⁸ Mark Bovens and Marcus Duwell (eds), *The Open Society and Its Future: Think Paper Series #1* (Utrecht University, Institutions for Open Societies, 2020) 7; Stephen Thornton, 'Karl Popper' in Edward N Zalta and Uri Nodelman (eds) *The Stanford Encyclopedia of Philosophy* (Winter 2022 Edition) <<https://plato.stanford.edu/archives/win2022/entries/popper/>> accessed 10 August 2023; Bas van Bavel, 'Open societies before market economies: historical analysis' (2020) 18(3) *Socio-economic review* 795, 795.

¹²⁹ Maurice Cornforth (ed), *The open philosophy and the open society: a reply to Dr. Karl Popper's refutations of Marxism* (International Publishers 1968) 281.

¹³⁰ Anna Gerbrandy, 'Global Challenges, Big Tech and Legal Responses' in Mark Bovens and Marcus Duwell (eds), *The Open Society and Its Future: Think Paper Series #1* (Utrecht University, Institutions for Open Societies 2020) 18.

¹³¹ In a sense that "open society" is about promotion of democratic governance and individual freedoms, while "social market economy" facilitates social cohesion and addresses economic inequality.

Against this backdrop, it is implicit that some values and domains of human life ought not be subjected to commodification that stems from the market. Where the threat of commodification is present, market-regulating institutions may step in to limit the reach of the market. However, since there is no formal hierarchy between market and non-market values, it does not tell one much about the balancing that would occur in case of a conflict.¹³² The seminal *Viking* and *Laval* cases demonstrated how the tensions between the economic and the social goals play out in practice, and despite the judgements being tilted in favour of economic concerns, the Court's approach has acknowledged the social state theory at the EU level.¹³³

When it comes to the implications for European competition law, its goals are to be examined and understood in the context of the European constitutional set-up. As has been demonstrated in this section, economic freedom provides one of the normative lenses for understanding the foundations of European competition law and policy. The infusion of social objectives into the market economy, to an extent, shapes the contours of the European economic constitution and, in turn, the boundaries of economic freedom. This is directly related to the type of society the EU strives to achieve. Furthermore, the character of that given society is shaped by the relationship between economic freedom and political freedom, the two notions are inextricably linked.¹³⁴ In this regard, the political character of competition law as well as the competition-democracy nexus has been well-established.¹³⁵

Thus, while fostering efficiencies and economic growth play an important role in the creation of prosperity and technological progress that contribute towards wellbeing of the citizens, in light of the social market economy goal, the EU's regulatory approach to regulating markets is slowly moving away towards a more social, civil-society oriented rhetoric. This process does not follow a pre-defined trajectory, but is evolutionary, adapting to the changing societal context. After all, the norms are not static and are subject to regeneration in cases where the old values do not reflect the

¹³² Johannes Persch, 'The role of fundamental rights in antitrust law – a special responsibility for undertakings with regulatory power under article 102 TFEU?' (2021) 17(3) *European Competition Journal* 542.

¹³³ The seminal *Viking* and *Laval* cases were important in demonstrating the tension between economic and social goals, with the former taking precedence: *Laval* (n 79), para 105; *Viking* (n 79), paras 78-79.

¹³⁴ Statistical results support the view that political freedom causes economic freedom but not the other way round. Yi Feng, *Democracy, governance and economic performance: theory and evidence* (MIT Press 2003) 295-298; Robert A Lawson and Jeff R Clark, 'Examining the Hayek-Friedman hypothesis on economic and political freedom' (2010) 74(3) *Journal of Economic Behavior and Organization* 230.

¹³⁵ Robert Pitofsky, 'Political Content of Antitrust' (1979) 127(4) *University of Pennsylvania Law Review* 1051, 1979.

view of a given society.¹³⁶ It is important to acknowledge that the EU’s “social deficit”, sometimes referred to in conjunction with the “democratic deficit”, is not resolved in practice.¹³⁷ It is widely stressed that in order to achieve a truly social market economy and reconciling the two, sometimes conflicting, goals the EU requires a further cultural and philosophical shift.¹³⁸ The Union’s normative direction, nevertheless, is clearly articulated.

The tension regarding the protection of the market and non-market values is particularly evident in relation to the challenge of the European digital transition and regulating digital markets as digital technologies are increasingly penetrating all aspects of personal lives and social spheres. Chapter 2 of this dissertation highlighted the ongoing shift toward emphasising the importance of safeguarding citizens’ interests and public values in digital environments. This further implies the need to revisit and potentially reshape the understanding of economic freedom and competitiveness in markets, in order to view them as being supported, instead of hindered, by the social dimension of the Union.¹³⁹ In order to provide a complete picture of what European competition law’s response to the hypernudging challenges should be, it is important to provide an additional layer of the shape of European constitutional set-up in the digital sphere.

3.2. Digital Transition and the Emergent European Digital Constitutionalism

The digitalisation of markets coupled with the increasing importance of the digital technologies in societal structures created an opportunity to stress and recalibrate the values that ought to shape European society. As elaborated in chapter 2, the nascent shift towards increased focus on safeguarding citizen values and public interests has been described as European digital constitutionalism: “a reaction against the challenges of the algorithmic society, and in particular the rise of platform powers”.¹⁴⁰ While

¹³⁶ Christian A Conrad, *Economic systems, markets and politics: an ethical, behavioral and institutional approach* (Springer 2022) 41.

¹³⁷ Joerges and Florian Rödl (n 110).

¹³⁸ Amandine Crespy, ‘Can Scharpf be proved wrong? Modelling the EU into a competitive social market economy for the next generation’ (2022) 26(5-6) *European Law Journal* 319, 330.

¹³⁹ *Ibid.* It is notable that digitalisation provides idiosyncratic challenges to balancing market and public values, distinguishing them from those explored in seminal *Viking* and *Laval* cases. While the latter concerned the conflict between EU’s economic freedoms and social rights embedded in the Member States’ legal frameworks, shaping of EU’s digital economy requires a harmonized approach. Since digital economy and by the same token powerful technology companies are increasingly interwoven in social and political institutional structures, the tension regarding balancing of these values on the EU level is critical.

¹⁴⁰ Giovanni de Gregorio, *Digital constitutionalism in Europe: Reframing rights and powers in the algorithmic society* (Cambridge University Press, 2022). The term “informational constitutionalism” was first coined by Fitzgerald in Brian Fitzgerald ‘Software as Discourse: a constitutionalism for information society’ (1999) 24 *Alternative Law Journal* 144.

in the discourse it could be positioned as a somewhat new constitutional paradigm, European digital constitutionalism is not about changing the basic normative principles and fundamental values that govern the European society, as embedded in the Treaties and constitutions of the Member States.¹⁴¹ Instead, it concerns the reinvigoration of the question of balancing between market imperatives and protecting fundamental rights and freedoms; it is about finding a new equilibrium between market and non-market values in the digital sphere.¹⁴²

While it is outside the scope of this dissertation to comprehensively examine the historical account of the digital transition, it is helpful to underline the (regulatory) perspectives that shaped it. The 1990s were a pivotal time in launching the digital economy.¹⁴³ As touched upon in chapter 2, this coincided with the EU adopting the neoliberal model as a dominant normative and legal framework for regulation of markets.¹⁴⁴ The neoliberal vision requires clear boundaries between the laws that regulate the public realm and the laws that govern the market realm.¹⁴⁵ When it comes to competition law, at the most basic level, it belongs to the laws that govern the market mechanism, addressing the market failure of market power.

At that time the emergent discourse on the Internet was marked by technological optimism: cyberspace was perceived as a knowledge democratising tool, a place outside the realms of the authorities and law of the physical world.¹⁴⁶ This narrative has persisted with the rise of the more human-centric Web 2.0 in the early 2000s, which placed user interaction as a characterising feature of digital products and services.¹⁴⁷ Against this background, both the US and the EU considered the digital environment to become an enabler of economic growth and innovation; in this paradigm, digital platforms were positioned as neutral service providers, with interference in the functioning of these markets being justified by the presence of market failure.¹⁴⁸

¹⁴¹ Jan Czarnocki, 'Saving EU digital constitutionalism through the proportionality principle and the transatlantic digital accord' (2021) 20(2) *European View* 150, 151.

¹⁴² Giovanni de Gregorio and Pietro Dunn, 'The European risk-based approaches: connecting constitutional dots in the digital age' (2022) 59(2) *Common Market Law Review* 473, 477; Czarnocki (n 141).

¹⁴³ Claudia Padovani and Mauro Santaniello, 'Digital Constitutionalism: Fundamental Rights and Power limitation in the Internet ecosystem' (2018) 80(4) *International Communication Gazette* 295.

¹⁴⁴ Scharpf (n 117).

¹⁴⁵ Elettra Bietti, 'The genealogy of digital platform regulation' (2022) 7(1) *Georgetown Law and Technology Review* 1.

¹⁴⁶ John Perry Barlow, 'A Declaration of the Independence of Cyberspace' (1996) <<https://www.eff.org/cyberspace-independence>> accessed 8 August 2023.

¹⁴⁷ Sareh Aghaei, Mohammad Ali Nematbakhsh and Hadi Khosravi Farsani, 'Evolution of the world wide web: from Web 1.0 to Web 4.0' (2012) 3(1) *International Journal of Web and Semantic Technology* 1.

¹⁴⁸ De Gregorio (n 140).

Neo-liberal digital policy, flavoured by techno-utopianism, not only unleashed the benefits of innovation, efficiency and cost-savings, but also gave rise to concerns over high market concentration, digital inequalities and surveillance.¹⁴⁹ The plethora of concerns that motivated a shift in European regulatory approach were discussed in chapter 2, and have generally been driven by the domineering market logic that places profit maximisation at the top of the pyramid of divergent stakeholder interests in digital environments.¹⁵⁰ In the EU, the awareness about these threats was solidified with the highly publicised WikiLeaks (2010), Snowden revelations (2013) and Cambridge Analytica (2016) scandals, which raised the political momentum for tightening the rules regarding users' data collection and processing,¹⁵¹ and ultimately shifted the focus towards the growing power of the US-based digital conglomerates.¹⁵²

Against this backdrop, the EU is positioning itself as a leading global actor in regulating digital markets.¹⁵³ The increased regulatory scrutiny and assumed pro-active role in shaping the digital transition in a way that fosters the vision of an open and democratic European digital society has been further motivated by the aspiration for “digital sovereignty”. The notion of digital sovereignty relates to the EU's geopolitical position in relation to the US and China. Under the status quo, the EU lacks control and independence when it comes to the development of its own digital infrastructures. By the same token, this lack of control hampers the EU's ability to set the terms of transactions and interactions that occur in the digital domain; some argue that there is a clear need for policy that encourages innovation and the development of European champions.¹⁵⁴

¹⁴⁹ Johannes M. Bauer, ‘Toward new guardrails for the information society’ (2020) 46 *Telecommunications Policy* 1, 1.

¹⁵⁰ For critical accounts, see: Shoshana Zuboff, *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power* (Profile Books 2019); Julie Cohen, *Between Truth and Power: The Legal Constructions of Informational Capitalism* (Oxford University Press 2019); Nick Couldry and Ulises A. Mejias, ‘Data Colonialism: Rethinking Big Data's Relation to the Contemporary Subject’ (2019) 20(4) *Television & New Media* 336.

¹⁵¹ Elena Sanchez Nicolas, ‘2013: Snowden was ‘wake-up call’ for GDPR’ (*euobserver*, 29 December 2020) <<https://euobserver.com/20th-anniversary/150050>> accessed 8 August 2023.

¹⁵² Cristiano Codagnone and Linda Weigl, ‘Leading the Charge on Digital Regulation: the More, the Better, or Policy Bubble?’ (2023) 2(1) *Digital Society* 4; Czarnocki (n 141), 150.

¹⁵³ José van Dijck, ‘Governing digital societies: Private platforms, public values’ (2020) 36 *Computer Law & Security Review* 105377.

¹⁵⁴ Luciano Floridi, ‘The fight for digital sovereignty: what it is, and why it matters, especially for the EU’ (2020) *Philosophy & Technology* 369, 370; Stephanie Couture and Sophie Toupin, ‘What does the notion of “sovereignty” mean when referring to the digital?’ (2019) 21(10) *New Media & Society* 2305. Van Dijck further observes that the dependence of our societies and institutions on these global digital infrastructures poses a risk to the openness of our societies and institutions. See: José van Dijck, ‘Open Societies and the Technical-Digital Perspective’ in Mark Bovens and Marcus Duwell (eds), *The Open Society and Its Future: Think Paper Series #1* (Utrecht University, Institutions for Open Societies 2020).

The EU's reaction to the digital transformation was "initially very slow, then gradually more assertive and determined".¹⁵⁵ The Commission's Communication *Digital Agenda for Europe* (2010), followed by the *Digital Single Market Strategy* (2015) were the catalysing documents for shaping the digital economy.¹⁵⁶ The frame of the Digital Single Market remained market-oriented, with regulations focusing on improving access to digital goods and services, as well as creating the right conditions for the innovation and growth of the digital economy. The Von der Leyen Commission seemed to have marked a change towards a more firm approach to digital policy, which focuses on rebalancing the concentration of value created by the digital economy from private entities to citizens.¹⁵⁷ The communications *Shaping Europe's Digital Future* (2020) and *Europe's Digital Compass to a successful digital transformation of Europe by 2030* (2021) further confirmed the vision for building the economy that works for the open, democratic and sustainable European society.

Moreover, the *European Declaration of Digital Rights and Principles for the Digital Decade* codified the EU's position for the digital transition that puts people at its centre. Despite its declaratory nature, the document "spells out shared political intentions and commitments and recalls the most relevant rights in the context of the digital transformation",¹⁵⁸ including the promotion of freedom of choice in people's interactions with algorithms and artificial intelligence systems.¹⁵⁹ Importantly, the declaration aligns the rights of people in offline and digital environments: what is deemed illegal offline, should not be accepted online.¹⁶⁰

The EU's emergent digital policy is built on the rhetoric of creating a distinct European digital identity, where users reap the full benefits of innovative digital markets. After all, the ongoing digital transition reasserts the key role of digital platforms for the current and future economic growth in the EU.¹⁶¹ However, as it has been explored in chapter 2, the specific legislative initiatives do not reshape the dichotomy between laws that govern market and non-market spheres. This can partially be explained by the

¹⁵⁵ Andrea Renda, 'Single Market 2.0: the European Union as a Platform' (2020) College d'Europe Research Paper in Law 02/2020, 7.

¹⁵⁶ Commission, 'A Digital Agenda for Europe' (Communication) COM/2010/0245 final; Commission, 'A Digital Single Market Strategy for Europe (Communication) COM/2015/0192 final.

¹⁵⁷ Andrea Renda (n 155), 2.

¹⁵⁸ The European Parliament, the Council and the Commission solemnly proclaim the following joint Declaration on Digital Rights and Principles for the Digital Decade, 'European Declaration of Digital Rights and Principles for the Digital Decade' [2023] OJ C 23/1, preamble (7).

¹⁵⁹ Ibid, Chapter III.

¹⁶⁰ Ibid.

¹⁶¹ Annabelle Gawer and Nick Srnicek, 'Online platforms: economic and societal effects' (Study Panel for the Future of Science and Technology, European Parliamentary Research Service 2021) <[https://www.europarl.europa.eu/RegData/etudes/STUD/2021/656336/EPRS_STU\(2021\)656336_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2021/656336/EPRS_STU(2021)656336_EN.pdf)> accessed 8 August 2023.

perspective that digital platforms have consistently fallen into the cracks of pre-existing regulatory frameworks, thereby escaping liability and strengthening their influence in different domains.¹⁶² While this dissertation highlights this point by placing the focus on European competition law, other legal fields are undergoing their own recalibration too.¹⁶³ Therefore, from a regulatory perspective, the first logical step requires realigning the pre-existing legal frameworks and tools to capture the dynamics of digital markets as well as enacting sector-specific regulation to address novel harms.

The digital policy status quo brings out a question whether the current regulatory developments are sufficient in aligning the EU's legal frameworks with the explicated normative commitments of an open and democratic European society that thrives in a highly competitive social market economy in which people and their freedom are prioritised.¹⁶⁴ In this regard and in light of the above, this dissertation argues that competition law should be implemented in a way that respects fundamental rights and democratic values, whilst striking a balance for market conditions that support innovation and growth, but do not disproportionately favour economic efficiency considerations.

While constituting a step in a positive direction, the sum of (emergent) laws do not tell a coherent story when it comes to the values that ought to be promoted in the digital sphere.¹⁶⁵ For the articulated normative position to be realised, a desired alternative approach requires public values to be systemically embedded in the digital environments by design.¹⁶⁶ The complexity and uncertainty that emerges from opaque algorithmic systems that are the lifeblood of the digital products and services, can only be tackled by introducing complementary ethical frameworks that would anchor digital policy decisions in a coherent manner.¹⁶⁷ This stems from an acknowledgement that a handful of digital conglomerates are becoming *de facto* “public actors without public values” and this trajectory needs to change in order to rebalance the power

¹⁶² Ibid, 1.

¹⁶³ For instance, the Digital Services Act amends the intermediary liability rules established by Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market ('Directive on electronic commerce') [2000] OJ L 178.

¹⁶⁴ Martin Schebesta, 'Climate change, digitization and globalization – does the social market economy need renewal?' (2020) *Konrad Adenauer Stiftung* 1, 2.

¹⁶⁵ José van Dijck, 'Governing platformization in Europe' in Dario Edoardo Vigano, Stefano Zamagni and Marcelo Sanchez Sorondo (eds) *Changing media in a changing world* (Libreria Editrice Vaticana 2021).

¹⁶⁶ Ibid; Natali Helberger and others, 'Choice architectures in the digital economy: Towards a new understanding of digital vulnerability' (2021) 45 *Journal of Consumer Policy* 175.

¹⁶⁷ Bauer (n 149), 2.

dynamics currently tilted in favour of digital platforms.¹⁶⁸ As one of the main pillars of the European economic constitution, competition law and policy has a role to play in contributing to the economy that is in line with the EU's normative commitments for the digital age.

4. Normative Framework

Much ink has been spilled over the goals of European competition law. To date, the interpretations remain fragmented, owing to the complex genealogy of European competition law's conceptual basis. This dissertation is a product of normative legal research, which requires constructing a normative framework to evaluate the role that European competition law ought to play when it comes to addressing the multifaceted and diffuse harms of hypernudging. The normative framework in essence comprises of values that serve as benchmarks in making evaluative judgements about the law. It is constructed by examining the law which refers to the standards, values, and principles that are part of European competition law (internal framing) and the theories that underlie those standards, values and principles, as well as the policy aims competition rules serve within the EU legal system as a whole (external framing).¹⁶⁹

The assessment of the internal and external perspectives, particularly in the context of the contemporary challenges brought by the digital transition, reveal an emerging dissonance: the EU's normative commitments and rhetoric is strongly oriented towards shaping the digital economy in a way that protects public values, while competition law is predominantly tied to the economic efficiencies-oriented interpretation. Predominantly, because the EU's normative direction had been recently reflected in the *Amendments to the Communication from the Commission Guidance on Enforcement Priorities in applying Article of the 82 EC Treaty (2023)*, which for the first time explicated that competition law can “contribute to objectives that go beyond consumer welfare, such as plurality in a democratic society”.¹⁷⁰

Taking the foundations of the EU legal system – an ideal of open and democratic society, based on the rule of law, committed to safeguarding public values – as a point of departure, the chosen values to comprise the normative framework in the present study are (1) *autonomy* and (2) *equality*.

¹⁶⁸ Linnet Taylor, ‘Public actors without public values: legitimacy, domination and the regulation of the technology sector’ (2021) 34(4) *Philosophy & Technology* 897; Miikka Hiltunen, ‘Social media platforms within internal market construction: patterns of reproduction in EU platform law’ (2022) 23 (9) *German Law Review* 1226.

¹⁶⁹ Taekema (n 2).

¹⁷⁰ Amendments to the Communication from the Commission Guidance on the Commission's enforcement priorities (n 66).

I chose these values because they are fundamental to the market logic of European competition law as well as the overarching EU's constitutional set-up, relating to the internal and external framing of the law, respectively. In this regard, variations of autonomy and equality are linked to economic freedom – a value which, as shown in this chapter, forms an important part of the European constitutional identity and European competition law.¹⁷¹

Furthermore, as alluded to earlier (see chapters 1 and 2), the debate on user influencing practices, in particular the impact of (digital) nudging on its users, are most prolific in relation to the values of autonomy and equality. Chapter 2 outlined the features of hypernudging processes, pointing to harmful manifestations that emerge because of their manipulative force. Hypernudging is based on an intimate understanding of users' characteristics and context. It is designed to subvert the individual's decision-making capacities, thereby having an effect on their autonomy.¹⁷² Similarly, as hypernudging interventions are designed to influence individuals based on their specific characteristics and circumstances and are deployed by AI-based automated systems, any intermediation bias in the process pose a risk of discriminatory treatment which directly impacts the value of equality.¹⁷³ Therefore, autonomy and equality are the values that are inherently at stake due to the nature of hypernudging. Ultimately, it is through the impact of hypernudging on autonomy and equality that economic freedom and its corollary freedom of choice are impacted too.

In the following sub-sections, I develop the workable conceptions of autonomy and equality, and in turn explicate these connections for the reader.

¹⁷¹ Leonardo Morlino, *Equality, Freedom and Democracy: Europe after the Great Recession* (Oxford University Press 2020).

¹⁷² Robert Baldwin, 'From regulation to behavior change: giving nudge the third degree' (2014) 77(6) *The Modern Law Review* 831. On the debate that centers around the tension between (digital) nudging and autonomy, see: Martin T. Wilkinson, 'Nudging and Manipulation' (2013) 61(1) *Political Studies* 341; Christopher McCrudden and Jeff King, 'The Dark Side of Nudging: The Ethics, Political Economy, and Law of Libertarian Paternalism' (2015) Public Law and Legal Theory Research Paper Series Paper No.485; Christian Schubert, 'On the ethics of public nudging: autonomy and agency' (2015) <<https://ssrn.com/abstract=2672970>> accessed 10 August 2023; Daniel Susser, Beate Roessler, Helen Nissenbaum, 'Online Manipulation: Hidden Influences in a Digital World' (2019) 4 *Georgetown Law Technology Review* 1.

¹⁷³ The discussion is prolific in regard to "algorithmic bias" and "AI discrimination", which connect to the profiling aspect of hypernudging: Eirini Ntoutsis and others, 'Bias in data-driven artificial intelligence systems—An introductory survey' (2020) 10(3) *Wiley Interdisciplinary Reviews: Data Mining and Knowledge Discovery* e1356; Frederik Zuiderveen Borgesius, 'Discrimination, artificial intelligence and algorithmic decision-making' (Council of Europe, 2018) <<https://rm.coe.int/discrimination-artificial-intelligence-and-algorithmic-decision-making/1680925d73>> accessed 23 August 2023.

4.1. Autonomy

The EU strives towards an ideal of an open and democratic society, based on the rule of law. It promotes liberal values of *inter alia* equality and freedom. In this regard, autonomy is considered to be a foundational value: the idea that people should possess legal and political rights in relation to public power are derivatives of autonomy because people have a right to make their own choices and decisions. Therefore, society should be organised in a way that allows individuals to exercise control over their own lives.¹⁷⁴

Autonomy is a widely debated concept, holding different meanings and different dimensions, depending on the perspective it is analysed from.¹⁷⁵ This dissertation does not aim to provide an exhaustive account of autonomy. Instead, the focus is on providing a workable conceptualisation that would help analyse and reflect on the impact of hypernudging processes on the users as individuals and collectively, in the context of the constitutional set-up of the EU and its response to the digital transition.

In Western societies, the liberal conception of autonomy plays an important role, and is closely related to negative freedom described above (section 3.1.1). When envisioning an autonomous person, we think of someone that is in charge of their life. Personal autonomy as “self-rule” is constituted by “independence of one’s deliberation and choice from manipulation by others, and the capacity to rule oneself”.¹⁷⁶ In this regard, emphasis is placed on individual freedom and self-determination, as well as rationality, individual responsibility and respect for individual rights. The state – or public power - does not define the “good life” for individuals; rather, it protects their rights to

¹⁷⁴ Originally, “the State power”, but for the purposes of describing the EU the term “public power” is more appropriate. Geoffrey Brahm Levey, ‘Confronting autonomy in liberal practice’ in Marie-Claire Foblets, Michele Graziadei and Alison Renteln (eds), *Personal Autonomy in Plural Societies: a Principle of Paradoxes* (Routledge 2017) 38; Peggy Valcke, Damian Clifford and Vilde Kirstina Steponenaite, ‘Constitutional Challenges in the Emotional AI Era’ in Hans-Wolfgang Micklitz, Oreste Pollicino and Amnon Reichman (eds), *Constitutional Challenges in the Algorithmic Society* (Cambridge University Press 2021) 67-68; Marina Al Oshana, *Personal Autonomy in Society* (Ashgate Publishing 2006) 15-16.

¹⁷⁵ For a historical account of the development of the notion of personal autonomy see: Viv Ashley, ‘Philosophical models of personal autonomy’, The Essex Autonomy Project: Green Paper Technical Report <<https://autonomy.essex.ac.uk/wp-content/uploads/2016/11/Essex-Autonomy-Project-Philosophical-Models-of-Autonomy-October-2012.pdf>> accessed 8 August 2023. On the distinction between moral autonomy, personal autonomy and political autonomy, see: Joel Anderson, ‘Autonomy’ in Hugh La Follette (ed) *The international encyclopedia of ethics* (Blackwell Publishing 2013) 1.

¹⁷⁶ John Christman, ‘Autonomy in Moral and Political Philosophy’ in Edward N Zalta (ed), *The Stanford Encyclopedia of Philosophy* (2020) <<https://plato.stanford.edu/entries/autonomy-moral/#AutLib-ConValEndCon>> accessed 8 August 2023.

define and pursue it for themselves.¹⁷⁷ Thus, the state plays a limited role by ensuring the removal of barriers to individual autonomy. In this sense, regulatory intervention is seen as necessary to ensure effective choice.¹⁷⁸

The relationship between autonomy and freedom is complex but explicating it is important to connect the normative framework with the overarching legal system of the EU and ultimately competition policy. Autonomy and freedom are distinct, yet interdependent concepts, with some going as far as to suggest that freedom without autonomy ceases to be as valuable.¹⁷⁹ In essence, freedom relates to one's ability to act, without internal or external restrictions, while autonomy refers to independence of the desires that inspire one to act.¹⁸⁰

In the market domain, which is relevant for European competition law from the internal framing perspective, hypernudging may impact economic freedom, by impacting personal autonomy of users in the first place. For instance, in chapters 4 and 5, I examine hypernudging by big technology companies as a vehicle for firms to engage in self-favouring behaviour that ultimately lead to limitation of market actors' economic freedom and consumer choice. However, hypernudging mechanisms as such do not necessarily lead to less choice or restriction of freedom of action. It is through subversion of users' decision-making capacities – personal autonomy – that hypernudging *de facto* leads to less freedom of action and choice.

This analysis can be mirrored in non-market domains. Chapter 6 examines the example of political microtargeting and its impact on citizens' personal autonomy in democratic processes, showing that subversion of citizens' decision-making may lead to diminished political freedom.

Finally, a notable debate in the liberal societies concerns the extent to which the state should actively promote positive freedom, which requires creating substantive opportunities to allow the society to pursue own goals, individually and collectively. Effectively, by creating conditions to empower individuals to exercise their autonomy more effectively, positive freedom can be seen as means to enhance it.

¹⁷⁷ Law Commission of Ontario, 'Positive liberty approaches to protecting autonomy' <<https://www.lco-cdo.org/en/our-current-projects/the-law-and-persons-with-disabilities/disabilities-call-for-papers-january-2010/commissioned-papers-the-law-and-persons-with-disabilities/a-new-paradigm-for-protecting-autonomy-and-the-right-to-legal-capacity/iv-negative-and-positive-liberty-approaches-to-protecting-autonomy/>> accessed 8 August 2023.

¹⁷⁸ Valcke, Clifford and Steponenaite, (n 171) 67-68.

¹⁷⁹ Joseph Raz, *The morality of freedom* (Clarendon Press 1986), 425. For a critical perspective, see: Susan Mendus, 'Liberty and Autonomy' (1987) 87 *Proceedings of the Aristotelian Society* 107.

¹⁸⁰ Christman (n 176).

Bringing the discussion back to the external framing of competition policy, the public power (the state) not only has a positive role in promoting economic freedom within the contours of the European economic constitution, but also in operationalising “the social market economy” model of economic system that is normatively committed to nurturing the open and democratic European society.

Therefore, the question that policymakers face is about striking the balance when it comes to promoting personal autonomy to enable the individual who has sufficient independence to exercise their will and who takes responsibility for their own fate, whilst not being disproportionately pushed and pulled by either of the two polar forces – the state and the market.¹⁸¹

4.2. Equality

The ideal of equality forms the normative foundation of open and democratic societies.¹⁸² From the outset of the European project, the value of equality has been rooted in the rationale of market integration.¹⁸³ It manifested through ensuring equality between Member States and the non-discriminating requirements in relation to the issue of nationality, covering the requirements for imports, foreign companies and workers in the economic domain.¹⁸⁴ The Court played a constitutionalising role in the adoption of the equality principle, and different variations of the equality ideal are now enshrined in the various parts of the Treaties and EU’s secondary law, uncoupling it from the internal market logic.¹⁸⁵

Equality is not a consensually agreed upon concept, and similarly to the approach adopted in regard to autonomy, this dissertation focuses on providing a workable conception of equality as embedded in the EU’s legal system and, ultimately, European competition law.

¹⁸¹ In open market economies, “the pull” comes from the market since the individual is carrying an immense responsibility to counter-act market forces with their will. Especially libertarian version of autonomy favors hyper-individualization, where individuals are perceived in charge of their own fate, they choose rationally and according to their will. In contrast, communitarian version of autonomy, with communist China being an example, is a situation where an individual being “pulled” by the State.

¹⁸² Beate Roessler, *Autonomy: An essay on the life well-lived* (Polity Press 2021), 169.

¹⁸³ Mark Bell, ‘The principle of equal treatment: widening and deepening’ in Paul Craig and Grainne De Burca (eds) *The evolution of EU law* (Oxford University Press 2011) 611.

¹⁸⁴ *Ibid.*, 613 and 626; Elise Muir, ‘The essence of the fundamental right to equal treatment: back to the origins’ (2019) 20 *German Law Review* 817, 817.

¹⁸⁵ For instance, TFEU (n 46), article 8: general policy of the EU to eliminate inequalities and to promote equality between men and women; TFEU (n 46), article 9 declares the fight against social exclusion; TFEU (n 46), article 10 combats discrimination based on sex, racial or ethnic origin, religion or belief, disability, age or sexual orientation; TEU (n 75), article 21(1) external action, reference to equality. See on commentary: Janneke Gerards, *Judicial review in equal treatment cases* (Brill 2005) 223; Stefan Kadelbach, ‘Are equality and non-discrimination part of the EU’s constitutional identity?’ in Thomas Giegerich (ed), *The European Union as protector and promoter of equality* (Springer 2020) 15.

The principle of equality in the EU generally encapsulates the conception related to formal equality, and follows a broad Aristotelian formulation: “comparable situations must not be treated differently, and different situations must not be treated in the same way, unless such treatment is objectively justified”.¹⁸⁶ The case for justification becomes weaker the more impactful the discriminatory practice is on human dignity and a person’s fundamental rights, and the less control they can exert on that criterion.¹⁸⁷ Thus, by its nature, equality is a relative concept.¹⁸⁸ From a legal point of view, it is also important to determine the weight that is attached to equality in comparison to other competing considerations.¹⁸⁹

Formal equality can be distinguished from material equality, which relates to achieving equality of outcomes and requires addressing differences in resources and opportunities. Material equality, also known as substantive equality, is closely tied to distributive justice principles, which for the purposes of this research play only a marginal role.¹⁹⁰

When it comes to European competition law, formal equality is a well-established value, coming in the form of non-discrimination requirements imposed on dominant undertakings vis-à-vis other market actors.¹⁹¹ In abuse of dominance case law, it manifested through the principle of equality of opportunity, which in the market domain concerns levelling the playing field for market actors, instead of being concerned with equality of outcomes, and in turn helps to guarantee “a system of undistorted competition”.¹⁹² Furthermore, in *Google Search (Shopping)*, the Court for the first time (in a competition law case) relied on the general principle of equal

¹⁸⁶ This formulation has been followed by a number of cases: Case 56/94 *SCAC Srl v Associazione dei Produttori Ortofrutticoli* [1995] ECLI:EU:C:1995:209, para 27; *Google and Alphabet v Commission (Google Shopping)* (n 61), para 155.

¹⁸⁷ Kadelbach (n 185), 21.

¹⁸⁸ Sofia Ranchordas, *Constitutional sunsets and experimental legislation: a comparative perspective* (Edward Elgar Publishing Limited 2014), 148.

¹⁸⁹ Christopher McCrudden and Sacha Prechal, ‘The concepts of equality and non-discrimination in Europe: a practical approach’ (2009) Report Commissioned by the European Commission, Directorate-General for Employment, Social Affairs and Equal Opportunities, 17.

¹⁹⁰ Lamont, Julian and Christi Favor, ‘Distributive Justice’ in Edward N Zalta (ed) *The Stanford Encyclopedia of Philosophy* Edward (2017) <<https://plato.stanford.edu/archives/win2017/entries/justice-distributive/>> accessed 10 August 2023. Among others, also see: John E. Roemer, *Theories of Distributive Justice* (Harvard University Press 1996); John Rawls, *A theory of justice* (Harvard University Press 2005); Ronald Dworkin, ‘What is equality? Part 1: Equality and Welfare’ (1981) 10(3) *Philosophy & Public Affairs* 185; Ronald Dworkin, ‘What is equality? Part 2: Equality of Resources’ (1981) 10(4) *Philosophy & Public Affairs* 283; Michael Walzer, *Spheres of Justice: A Defense of Pluralism and Equality* (Basic Books 1983); Amartya Sen, ‘Development as capability expansion’ (1989) 19(1) *Journal of Development Planning* 41.

¹⁹¹ Elias Deutscher, ‘Competition and equality: a republican account’ in Jan Broulik and Kati Cseres (eds), *Competition law and economic inequality* (Hart Publishing 2022) 24.

¹⁹² *Ibid*, 23; C-280/08 P *Deutsche Telekom v Commission* [2010] ECLI:EU:C:2010:603, para 230; C-553/12 P *DEI v Commission* [2014] ECLI:EU:C:2014:2083, para 114.

treatment.¹⁹³ Focusing on formal aspects of equality is also consistent with the position that undertakings are allowed to obtain significant market power when they compete based on merits. Competition law does not aim to protect competitors.¹⁹⁴

The analysis on the formal conception of equality is also relevant in the context of the EU's role in the protection of European citizens' fundamental rights and freedoms. The Chapter III titled "Equality" of *The Charter of Fundamental Rights of the European Union* clearly asserts the foundational status of this value in the Union.¹⁹⁵ Interpretation of the ideal of equality in this regard is based on the idea that people are guaranteed equal rights and freedoms because individuals possess equal moral value and worth, regardless of their race, gender, religion, or other distinguishing features.

While against the backdrop of the European project, the value of equality holds a foundational status in its own right, for the purposes of this dissertation it is helpful to further add that it is linked with the value of freedom examined throughout this chapter. The conception of formal equality is to a large extent consistent with the value of freedom because it prevents restrictions on individuals' choices and capabilities.¹⁹⁶ They share a mutually reinforcing association, since in open and democratic societies freedom assumes equal rights. At the same time, protecting individuals from discrimination or arbitrary treatment allows enjoying their freedoms and rights without undue interference.¹⁹⁷

In the market domain, once hypernudging by vertically integrated firms, such as big technology companies, is deployed in a large-scale, systemic manner, with intermediation bias at play, it may interfere with downstream competitors' ability to compete. This may lead to *de facto* limitation of users' freedom of meaningful choice (see chapters 4 and 5).

In regard to political freedom, the same issue can be reflected in citizens receiving fragmented political messages and information, which are required to meaningfully form a political opinion and participate in the democratic debate (see chapter 6). Therefore, while the choice of the value of equality is justified through its meaningful

¹⁹³ *Google and Alphabet v Commission (Google Shopping)* (n 61), para 155.

¹⁹⁴ Case C-209/10 *Post Danmark A/S v Konkurrenceradet* [2011] ECLI:EU:C:2011:342, Opinion of AG Mengozzi, para 98.

¹⁹⁵ Charter of the Fundamental Rights of the European Union [2000] OJ C 364/1, Chapter III. For commentary see: Ana M Guerra Martins, 'Equality and non-discrimination as an integral part of the EU constitutional order' in Thomas Giegerich (ed), *The European Union as protector and promoter of equality* (Springer 2020) 40.

¹⁹⁶ This view can be contrasted with the tension between material equality and freedom, which refers to a debate on the best way to distribute resources and welfare in a given society to achieve some degree of material equality. Paul Spicker, 'Why freedom implies equality' (1985) 2(2) *Journal of Applied Philosophy* 1, 1 and 7.

connection to European competition law and the EU's legal order, the mutually reinforcing relationship between equality and freedom creates an additional reason of inquiry.

5. Conclusion

In a given society, the chosen and prioritised values serve as an anchor when it comes to responding to the evolving economic and political circumstances. As a symbol of strength and stability, such an anchor allows that society not sail too far away from the outcomes it deems important. As has been elaborated in this chapter, the EU is currently undergoing a transformative change in regulating digital markets. The digital transition has not only brought vast benefits and opportunities, but also showcased that disproportionate favouring of market values in contrast to the public values led to a plethora of concerns which would not be adequately addressed by existing legal frameworks. Hypernudging by big technology companies provides a potent example of practices that result in multifaceted and diffuse harms and has up until recently barely been captured by the law.

This dissertation is set out to answer the main research question: “What is the role that European competition law ought to serve to address the challenges raised by big technology companies hypernudging their users?” This is a prescriptive question which requires not only to ground the research project in European competition law as a relevant legal framework for addressing the harms of hypernudging, but also to question the very boundaries of this legal field. Since hypernudging processes may take various forms and manifest in different, sometimes overlapping, domains, this chapter provided a critical account of the shape competition law ought to take in order to promote the clearly articulated normative direction the EU is taking in shaping the digital economy. As a result, this chapter informs the findings and overall recommendations that follow in this dissertation.

The normative underpinnings of European competition law were assessed by examining its legal-historical roots and uncovering the aims and values that competition rules aim to promote. The analysis of the distinct phases of competition policy development – the formative period, the modernisation period and the contemporary period – unveiled the fragmented nature of its goals, showcasing that economic efficiency is not the ultimate response to the normative foundations of European competition law. By stepping outside the internal perspective of the law, the second part of this chapter positioned competition law within EU's constitutional framework, which clearly articulates the normative position the EU is striving towards. In this regard, the highly competitive social market economy can be viewed as a basis of the Union, with fundamental values

codified in Article 102 TFEU, drawing the vision for that social market economy's achievement. Against the backdrop of the emergent digital constitutionalism in the EU, this chapter stressed the ongoing challenge of finding the new equilibrium between the market and non-market values that ought to be prioritised in digital markets, leading to questions of how this new equilibrium would shape competition policy.

Connecting to the internal and external perspectives of the law, this chapter examined and justified the two concepts which were chosen to evaluate the role that European competition law should play in addressing multifaceted hypernudging harms. Highlighting the entwinedness with the outlined notions of economic freedom and its limiting socio-political considerations, it developed workable accounts of autonomy and equality as the fundamental values upon which the EU is built upon. These values will return in the next chapters, explicitly or implicitly, and will be the touchstones for answering the overarching research question in the final evaluation chapter.



Chapter 4

Two Sides of the Digital Advertising Coin: Putting Hypernudging into Perspective

Viktorija Morozovaite, 'Two sides of the digital advertising coin: putting hypernudging into perspective' (2021) 5(2) Competition & Markets Law Review 105-145. DOI: <https://doi.org/10.34632/mclawreview.2021.10307>.

Digital advertising markets have evolved into a complex system with multiple interdependent actors interacting across the supply and demand chains. Google has emerged as a systemic actor in the digital advertising ecosystem. The company's presence within each layer of the digital advertising value chain, combined with the opacity and complexity of the market mechanisms, creates dependency challenges for business users. Google is also a choice architect that shapes users' experiences on its platform's business domains, including the experiences of the ads they are exposed to. Therefore, the company is uniquely positioned to hypernudge users towards specific market outcomes; it has the ability to steer within markets whilst following its economic imperatives. Positioning digital advertising by Google within the hypernudging framework provides a new lens for studying its potential for influencing digital advertising market dynamics and individual users. Hypernudging refers to one of the most sophisticated data-driven nudging processes that allow for dynamically personalised user steering, where (when executed perfectly) the right user is reached with the right message, by the right means, at the right time, as many times as needed. By examining local search advertising on Google Maps and multi-channel integrated advertising campaigns, this article shows that both could constitute a form of hypernudging. As the welfare effects of hypernudging are inconclusive, these processes are not considered to be intrinsically problematic. However, with potential intermediation bias at play, hypernudging may lead to dangers of systemic market manipulation and limitation of consumer choice. Once consumer harm is present, some forms of hypernudging may fall within the realm of competition law relevant practices. Competition authorities may examine biased market intermediation as exclusionary abuse; by the same token, by focusing on direct harm to consumers, they may explore the exploitative abuse route. However, as it is Google's systemic position on the advertiser- and user- sides of the market that is the source of hypernudging, effects felt on both sides are not only inseparable, they are mutually reinforcing. Thus, only once we zoom out and take a holistic view of these both sides, the full picture of the impact of hypernudging emerges, requiring one to potentially step outside the realms of the traditional competition law assessment.

1. Introduction

Digital advertising has changed the way advertisers interact with their customers and become one of the most pivotal funding models for content and services online.¹ In this business model, the intermediary platform matches and connects advertisers and publishers with the desired users' audience.² These markets are dynamic and innovative in nature, with technological developments facilitating the emergence of new types of techniques and intermediaries for a more potent delivery of ads. This contribution centres around Google – a company that has uniquely positioned itself as a systemic player within each layer of the digital advertising value chain. The God's eye view over digital advertising market dynamics, combined with deep knowledge of users' preferences and needs, puts the company in a powerful position to influence the respective market actors' experiences.

This article examines Google's local search advertising services by positioning them within a hypernudging framework, which provides a new lens for studying Google's potential influencing of digital markets, as well as its (individual) users. Hypernudging refers to one of the most sophisticated data-driven nudging practices that allows for dynamically personalised user steering, where (when executed perfectly) the right user is reached with the right message, by the right means, at the right time, as many times as needed.³ This may be a cause for concern, as by shaping users' perception of (market) realities, hypernudging can be used to subvert autonomous choice and manipulate users into outcomes inconsistent with their true preferences. When it is done in a large-scale, systemic manner, the market manipulation dangers appear. However, market manipulation concerns may not be plausible without Google being positioned to control the interactions on both sides of the market. As the user- and advertiser-facing sides are intricately entwined, the power to hypernudge individuals is dependent on the platform's ability to steer within markets. Thus, it is Google's market position in combination with these markets that gives the platform the power to hypernudge individuals by way of compounding data flows and opaque algorithmic management.

¹ David J Teece, 'Business models, business strategy and innovation' (2010) 43(2), *Long Range Planning* 172.

² Jean-Charles Rochet, and Jean Tirole, 'Platform competition in two-sided markets' (2003) 1(4) *Journal of the european economic association* 990; David S Evans and Richard Schmalensee, *Matchmakers: The new economics of multisided platforms* (Harvard Business Review Press 2016).

³ Karen Yeung, 'Hypernudge': Big Data as a mode of regulation by design' (2017) 20(1) *Information, Communication & Society* 118; Marjolein Lanzing 'Strongly recommended revisiting decisional privacy to judge hypernudging in self-tracking technologies' (2019) 32(3) *Philosophy & Technology* 549; Stuart Mills, 'Personalized nudging' (2020) *Behavioural Public Policy* 150; Autoriteit Consument & Markt (ACM) 'Protection of the online consumer: Boundaries of online persuasion' (Guidelines) (2020) 7 <<https://www.acm.nl/sites/default/files/documents/2020-02/acm-guidelines-on-the-protection-of-the-online-consumer.pdf>> accessed 23 August 2023.

The current research on digital advertising does not take into account platforms', such as Google, role in steering users towards transactions, and how that contributes to further cementing their market position on the user- and advertiser-facing sides of the market. Addressing this gap in research is relevant for competition law, as it is a stepping stone for an in-depth analysis of whether the effects of hypernudging would fall under the current scope of European competition law, and assessing whether the scope should be broadened would this not be the case.

This article proceeds by firstly providing an overview of Google's ad tech stack and different types of digital advertising, highlighting the company's structural position within the digital advertising value chain. Secondly, different types of digital advertising are evaluated in light of the hypernudging framework, which places focus on the company's power to influence the user. The scope of this article is limited to examining local search advertising on Google Maps as a potential form of hypernudging, as well as integrated advertising campaigns that combine different types of ads to steer the user towards the same pre-determined goal. Finally, it will assess the challenges of hypernudging through the lens of both the market and the user, highlighting the entwinedness and reinforcing qualities of both sides of the market, concluding with competition policy considerations.

2. Google's role in the digital advertising ecosystem

"Almost every ad flying through online ad ecosystem touches Google in some way" as the company holds a strong position within each stage of the digital advertising value chain.⁴ This section will introduce Google's ad tech stack, which highlights its structural position in the digital advertising ecosystem. Furthermore, it will explain types of advertising, which can be deployed separately or as part of the integrated advertising campaign, and in turn lay down the context for assessing different digital advertising solutions as a form of hypernudging (see section 3).

2.1. Google's Ad Tech Stack

Digital advertising has evolved into a complex system with multiple interdependent market actors interacting across the supply and demand chains. The series of companies and technologies that get an advertiser's message in front of the right consumer at the right time, in marketing terms, comprise the Ad Tech stack. The intermediation value chain can be divided into supply and demand sides. On the supply side: there

⁴ Gerrit de Vynck and Naomi Nix, 'How Google's ad ecosystem works' (*Bloomberg*, 24 October 2019) <<https://www.bloomberg.com/news/features/2019-10-24/how-google-s-ad-ecosystem-works>> accessed 30 June 2021.

are publishers that offer space on their websites or apps for ad placement; Publisher Ad Servers – tools that publishers use to manage their ad inventory. The technology is mostly integrated into publisher’s webpage to accept the advertising and place it in the right place at the right time; Supply Side Platforms (SSPs) – the technology that interfaces with the Demand Side Platform (DSP) that determines the price and allocation of the digital ad inventory through sequential or real-time auctions. On the demand side: there are advertisers that are interested in serving ads to web users; Advertiser Ad Servers – tools that advertisers use to manage their ad campaigns. It provides the functionality that stores ads and delivers creative content to publishers when needed; DSP – the platform that advertisers use to organise and buy digital inventory. The digital advertising ecosystem further includes Ad Exchanges (digital marketplaces for ad inventory), Ad Networks (a pool of ad inventories from a large number of publishers that can be sold to advertisers directly) and Data Management Platforms.⁵

Over the past years, the digital advertising ecosystem has become more concentrated. On the supply side, most market players point out that they perceive Google and Facebook to hold a duopoly in the supply of display advertising.⁶ Nevertheless, Facebook accounts for around 50% of the market share of display supply, and sells display ads within its own self-contained system, which is separate from Google’s ad tech stack.⁷

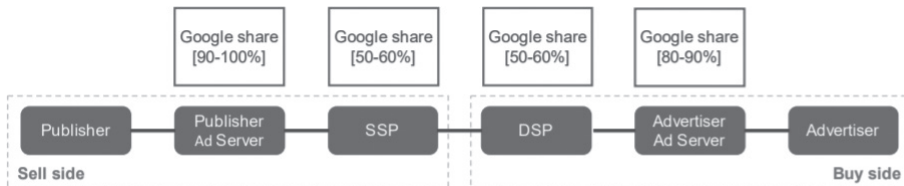


Figure 1: Google’s roles in advertising intermediation⁸

Publisher ad server – Google Ad Manager.

SSP - Google’s Ad Exchange (AdX).

Advertiser ad server – Display & Video 360.

DSP – Google’s DoubleClick Bid Manager (DBM).

Ad Exchange – Google AdX, recently integrated with Google Ad Manager.

⁵ For a thorough explanation, see Niklas Fourberg and others, ‘Online advertising: The impact of targeted advertising on advertisers, market access and consumer choice’ (European Parliament, 2021) 21-26.

⁶ Fiona MS Morton and David C Dinielli, ‘Roadmap for a digital advertising monopolization case against Google’ (2020) *Omidyar Network* 4.

⁷ Competition and Markets Authority (CMA), ‘Online platforms and digital advertising. Market study final report’ (2020) para 63 <https://assets.publishing.service.gov.uk/media/5fa557668fa8f5788d-b46efc/Final_report_Digital_ALT_TEXT.pdf> accessed 8 August 2023.

⁸ *Ibid*, 20.

Ad Network – Google AdSense, which is accessed through Google Ads program, which enables advertisers to create ads that will appear on relevant Google’s SERPs and Google’s network of partners sites.

As Google holds a strong position within each level of the value chain, it is also becoming a one-stop-shop for publishers and advertisers in the market.⁹ The company offers a selection of highly integrated ad tech products and services that provide an attractive proposition to business users, which no longer need to search beyond Google’s offerings. By becoming a one-stop-shop, Google is slowly evolving into a “walled garden” for digital advertising – a term used to describe a closed ecosystem in which all the operations are controlled by the ecosystem’s operator.¹⁰ By locking market actors into an increasingly closed Google’s digital advertising ecosystem, the platform exercises and reinforces its power through its internal policies.¹¹ For instance, a recent privacy-related move for phasing out third party cookies on Google Chrome by 2022 has raised concerns over the platform further entrenching its data dominance and *de facto* excluding rivals.¹²

Google’s scale and its integration of high quality services and technologies offers data advantages that cannot easily be replicated by competitors. From advertisers’ perspective, Google’s ability to target (and gather user data) across different services and devices offers a reduction of transaction costs with the promise of effectively reaching the right consumer.¹³ In addition, the contemporary developments in marketing campaigns show a shift towards consumer-centric programmatic advertising, highlighting the key role these data advantages play in effective advertising campaigns. Google’s ad tech stack offers programmatic properties to different types of digital ads. Programmatic advertising “describes the automated serving of digital ads in real-time based on individual ad impression opportunities”.¹⁴ Its goal is to connect people with the right messages at the right time, while doing so in a large-scale automated manner.¹⁵ The cornerstone feature of programmatic advertising boils down to granularity – the ability of the system to fully consider individual impression ad opportunities together with their general parameters, specific recipients and specific advertising environment

⁹ Morton and Dinielli (n 6), 10.

¹⁰ Pierre de Poulpique, ‘What is a Walled Garden? And why it is the strategy of Google, Facebook and Amazon ads platform?’ <<https://medium.com/mediarithmics-what-is/what-is-a-walled-garden-and-why-it-is-the-strategy-of-google-facebook-and-amazon-ads-platform-296ddeb784b1>> accessed 8 August 2023.

¹¹ ‘Community’, Google Ads Help, Google <<https://support.google.com/google-ads/thread/9261457?hl=en>> accessed 30 June 2021.

¹² Fourberg and others (n 5), 43.

¹³ Damien Geradin and Dimitrios Katsifis, ‘An EU competition law analysis of online display advertising in the programmatic age’ (2019) 15(1) *European Competition Journal* 55, 71.

¹⁴ Oliver Busch, ‘The programmatic advertising principle’ in Oliver Busch (ed), *Programmatic advertising: The successful transformation to automated, data-driven marketing in real-time* (Springer 2016) 8.

¹⁵ *Ibid*, 4.

in real-time.¹⁶ It is noteworthy that while programmatic advertising is mostly associated with display ads, it may also be used for search ads, especially in integrated advertising campaigns.¹⁷

While business users may find Google's services convenient, or even essential, there are concerns within the industry over the lack of transparency regarding the pricing structures and auction results.¹⁸ The opacity of the market on both supply and demand sides, as well as the growth of the garden walls, may be further reinforced by Google's complementary products. For instance, Google Analytics holds the highest market share in the web analytics market.¹⁹ It provides tools to track the performance of advertisement campaigns, measuring the app and web interactions together.²⁰ This allows advertisers to get a full grasp on the effectiveness of their campaigns, as the latest version of Google Analytics allows seeing conversations from YouTube video views together with conversations from Google and non-Google paid channels, and organic channels like Google search. Even though Google Analytics provides immense efficiencies to market actors, it may also lead to less transparency, and mistakes may take time to be detected. This is because it is difficult to compare results between Google and other providers, leading to challenges in assessing the accuracy of data regarding the effectiveness of the advertising campaign.²¹

2.2. Types of Digital Advertising

Having established that Google holds a sustained systemic position within each layer of the digital advertising value chain, it is important to explain the different types of ads that reach users online, which will serve as context in the assessment of digital advertising as a form of hypernudging. There are three types of digital advertising: search advertising, display advertising and classified advertising.²² Generally, business users do not consider them as substitutes, but they nevertheless exhibit complementary

¹⁶ Ibid.

¹⁷ Australian Competition and Consumer Commission (ACCC), 'Digital platforms inquiry: Final report' (Australian Competition and Consumer Commission, 26 July 2019) 123 <<https://www.accc.gov.au/about-us/publications/digital-platforms-inquiry-final-report>> accessed 10 August 2023.

¹⁸ Dina Srinivasan, 'Why Google dominates advertising markets. Competition policy should lean on the principles of financial market regulation' (2020) 24(1) *Stanford Technology Law* 55, 114; CMA (n 7), para 21; ACCC (n 17), 160. Geradin and Katsifis (n 13), 60.

¹⁹ Analytics 35.78%, Google Universal Analytics 25.71%, Google Global Site Tag 10.88% followed by Facebook Analytics 7.23%, see: 'Web analytics software market share' <<https://www.datanyze.com/market-share/web-analytics--1>> accessed 24 June 2021.

²⁰ 'Meet the next generation of Google Analytics', Analytics Help, Google <<https://support.google.com/analytics/answer/9164320?hl=en#zippy=%2Creleases>> accessed 24 June 2021.

²¹ On lack of transparency: CMA (n 7), para 8.233.

²² Fourberg and others (n 5), 16.

properties.²³ The advertisers may set-up separate campaigns on Google Search Network (GSN) and Google Display Network (GDN), respectively. Both are company's own closed networks of websites that advertisers can run their ads on.²⁴ For the purposes of this article, the stronger focus is placed on (local) search advertising, where Google holds a dominant market position on both advertiser- and user-facing sides of the business. However, it is noteworthy that the auction mechanisms that determine the placement of the ads and pricing structures offered by the GSN and GDN are very similar. Furthermore, advertisers may also opt for integrated advertising campaigns, either by using the Display Expansion on Search campaigns²⁵, thereby remaining within a closed Google's network, or buying ads programmatically via Google's advertising technology, which allows advertisers to buy inventory from publishers or ad exchanges outside of it.²⁶

2.2.1. Search Advertising

Search advertising is a format of advertising where an advertiser pays for its ads to usually appear next to the results from consumer's search on services with a search function such as Google Search.²⁷ Search engines allow users to find specific information on the Internet and by typing their query into a search query box, users reveal their intentions and provide valuable information to advertisers.²⁸ This type of advertising is used as a means to drive consumers to take a particular action such as clicking on a link.²⁹

The search-advertising ecosystem consists of a number of actors that intermediate the interactions between advertisers and users. Google and/or its close partners play the key roles within this chain. For most advertisers willing to place search ads, Google Ads is the natural starting point. The advertiser will set up a campaign within the Google Search Network which allows the ad to be shown on Google sites (e.g., Google Search, Google Maps, Google Play) but also within the search results of Google search

²³ CMA (n 7), para 5.375; Autorité de la concurrence, 'Opinion no. 18-A-03 of 6 March 2018 on data processing in the online advertising sector' (2018) paras 178-182 <https://www.autoritedelaconcurrence.fr/sites/default/files/integral_texts/2019-10/avis18a03_en_.pdf> accessed 21 August 2023.

²⁴ Fourberg and others (n 5), 22-23.

²⁵ 'About display expansion on search campaigns', *Ads Help, Google* <https://support.google.com/google-ads/answer/7193800?hl=en&visit_id=637411381689972010-1940902750&rd=1> accessed 29 June 2021.

²⁶ Ryan Skeet and Jessica Maunder, 'GDA vs. DV360: Comparing Google's display platforms', Merkle <<https://www.merkleinc.com/emea/blog/where-should-you-run-your-display-activity-a-comprehensive-comparison-of-googles-display-platforms>> accessed 30 June 2021.

²⁷ CMA (n 7), para 2.44.

²⁸ Francesco Ducci, *Natural monopolies in digital platform markets* (Cambridge University Press 2020) 47.

²⁹ CMA (n 7), para 2.46.

partners.³⁰ Each time a user conducts a search, Google runs an algorithmically curated auction to determine which ads should be presented to the user. Advertisers choose keywords they want to advertise on, input the text and how much they are willing to pay for a click on the ad.³¹ Once relevant search is conducted, Google's algorithm ranks ads based on the three main factors: advertiser's bid, the quality of ads (how relevant and useful the ad and the webpage it links to are to the user), and the expected impact from advertiser's ad extensions and other ad formats.³² The company's system relies on a Generalised Second Price (GSP) auction mechanism, meaning that advertisers do not pay what they bid for – they pay just enough to beat the bid of the next ranked ad; advertisers are usually charged a standard pay-per-click rate (PPC), meaning that they only pay if a user has clicked on the ad.³³

From the publishers' perspective – websites, such as blogs or newspaper websites – Google offers AdSense intermediation services for the placement of ads to help to manage and monetise their services.³⁴ Such websites often have a search function embedded and once a user searches through it, the website delivers search results together with the search ads.³⁵ Every time a user clicks on the advertisement on search results page, both Google and the publisher will receive a commission. With a European market share above 80%, Google comfortably maintains a dominant position in the online search intermediation market.³⁶

2.2.2. Display Advertising

Display advertising refers to ads that appear on a publisher's website or an app, usually on a side window or another designated space on the webpage.³⁷ In contrast to search ads, users are exposed to display ads not because they were looking for similar items or services on the relevant website, thereby revealing their intention, but to

³⁰ 'About the Google search network', Google Ads Help, Google <<https://support.google.com/google-ads/answer/1722047?hl=en>> accessed 30 June 2021.

³¹ Jack Nickas, 'How Google's ad auctions work' (*The Wall Street Journal*, 19 January 2017) <<https://www.wsj.com/articles/how-googles-ad-auctions-work-1484827203>> accessed 30 June 2021.

³² 'How the Google ads auction works', Ads Help, Google <<https://support.google.com/google-ads/answer/6366577?hl=en>> accessed 30 June 2021.

³³ Nickas (n 31); Siva Vaidhyanathan, *The Googlization of everything (and why we should worry)* (University of California Press 2011) 15. Other pricing structures: cost-per-impression (CPI), cost-per-view (CPV) or cost-per-action (CPA).

³⁴ 'Difference between AdSense and Google Ads', AdSense Help, Google <https://support.google.com/adsense/answer/76231?hl=en&ref_topic=1319753> accessed 16 June 2021.

³⁵ Commission, 'Antitrust: Commission fines Google €1.49 billion for abusive practices in online advertising' (20 March 2019) <https://ec.europa.eu/commission/presscorner/detail/en/IP_19_1770> accessed 21 August 2023.

³⁶ *Google Search (AdSense)* (Case AT.40411) Commission Decision C(2019) 2173 final [2019] OJ C 369, paras 234-236.

³⁷ Morton and Dinielli (n 6), 4.

raise brand awareness among consumers.³⁸ Display advertising includes social media, video and banner advertisements.³⁹ Currently, over 80% of display ads are bought programmatically.⁴⁰

2.2.3. Classified Advertising

Classified advertising refers to advertising where advertisers directly purchase advertising slots to list specific products or services on a publisher's website.⁴¹ There is a wide range of platforms focused on specific sectors, such as recruitment, e-commerce or consumer finance, that provide advertisers with the ability to list specific products and services and for the users the functionality to compare these listings.⁴² Examples of specialised online outlets that offer classified ads include Gumtree or Craigslist.⁴³

3. Digital Advertising as a Form of Hypernudging

The first section of this article has showed that from the business users' perspective, Google is a systemic actor within the digital advertising ecosystem. However, Google is concomitantly a choice architect that organises users' experience on its services. By showing ads to the users, the platform, following its economic imperatives, may steer them towards specific outcomes. This section will evaluate digital advertising through the lens of hypernudging framework, which focuses on Google's power to influence user behaviour. The scope of this article is limited to local search advertising on Google Maps, where Google has a sustained and sizeable market share indicating market power. Moreover, given Google's unique position to deploy integrated advertising campaigns across its many business domains, this section will also consider the more holistic hypernudging opportunities.

³⁸ Geradin and Katsifis (n 13), 54; Daniel Bitton and others, 'Competition in display ad technology: A retrospective look at Google/Facebook and Google Admob' (2019) *CPI Antitrust Chronicle* 2.

³⁹ Fourberg and others (n 5), 17. Examples: Video – Youtube, Social Media – Facebook, TikTok, Banner – on publishers' website or within the app.

⁴⁰ Geradin and Katsifis (n 13), 61.

⁴¹ Fourberg and others (n 5), 18.

⁴² CMA (n 7), para 2.54.

⁴³ Stigler Center for the Study of Economy and the State, 'Stigler Committee on digital platforms: Final report' (Chicago Booth, 2019), 178 <<https://www.chicagobooth.edu/-/media/research/stigler/pdfs/digital-platforms---committee-report---stigler-center.pdf>> accessed 10 August 2023.

3.1. Introduction to Hypernudging

Hypernudging is built on the insights of linkages between the behavioural economics-grounded theory of the nudge and information systems (IS) literature.⁴⁴ The nudge theory facilitated the development of behavioural interventions with the goal to allow public bodies to encourage citizens to make better decisions as judged by themselves.⁴⁵ It incorporated rich behavioural economics research, which established that market actors' behaviour is influenced by environmental and cognitive constraints – they are boundedly rational.⁴⁶ In complex decision-making environments, people tend to rely on a limited set of mental rules of thumb (heuristics), which simplify complicated tasks of assessing probabilities and predicting values. While in the majority of cases such decision-making leads to desired outcomes, it may also result in systemic mistakes in judgement (biases).⁴⁷ When assessing decision information, individuals use two distinct cognitive systems: automatic and reflective, former being described as associative, heuristic, and intuitive and latter referring to rule-based, analytical and reflective processes.⁴⁸

The nudge has been originally defined as “any aspect of the choice architecture that alters people’s behaviour in a predictable way without forbidding any options or significantly changing their economic incentive”.⁴⁹ Choice architecture refers to a decision-making environment.⁵⁰ As people’s decision-making is affected by their cognitive and environmental limitations, the choice architect may harness their cognitive boundaries and influence how people behave by arranging their decision information, decision structure and decision assistance.⁵¹ Practical applications of the nudge theory have shown that something as simple as framing options or setting a

⁴⁴ Yeung (n 3); Lanzing (n 3); ACM, (n 3); Mills (n 3); Tim-Benjamin Lembcke and others, ‘To nudge or not to nudge: ethical considerations of digital nudging based on its behavioral economics roots’ (27th European Conference on Information Systems 2019, Stockholm and Uppsala, 8-14 June 2019) 2.

⁴⁵ Ibid, 3.

⁴⁶ Herbert A Simon, ‘A behavioural model of rational choice’ (1955) 69(1) *The Quarterly Journal of Economics* 99.

⁴⁷ Amos Tversky and Daniel Kahneman, ‘Judgment under uncertainty: Heuristics and biases’ (1974) 185(4157) *Science* 1124; Daniel Kahneman, *Thinking, fast and slow* (Macmillan 2011).

⁴⁸ Daniel Kahneman and Shane Frederick, ‘A model of heuristic judgment’ in Keith J Holyoak and Robert G Morrison (eds) *The Cambridge handbook of thinking and reasoning* (Cambridge University Press 2005) 267-293; Keith Frankish, ‘Dual-process and dual-system theories of reasoning’ (2010) 5(10) *Philosophy Compass* 915.

⁴⁹ Cass R Sunstein and Richard H Thaler, *Nudge: Improving decisions about health, wealth, and happiness* (2nd edn, Penguin Books 2009), 8.

⁵⁰ Cass R Sunstein, ‘Nudging and choice architecture: Ethical considerations’ (2015) *Yale Journal on Regulation* 1, 8.

⁵¹ Robert Münscher, Max Vetter and Thomas Scheuerle, ‘A review and taxonomy of choice architecture techniques’ (2016) 29(5) *Journal of Behavioural Decision Making* 511, 514.

default may have a significant impact on pension savings⁵², organ donations⁵³ and more.⁵⁴ Despite the acclaimed practical implementations of nudging, the theory has been ridden with libertarian paternalism and ethical critiques.⁵⁵ However, such *normative* discussion is outside the scope of this article, which focuses on nudging as understood in a *descriptive* sense.⁵⁶

With digitalisation and technological developments, people's decision-making increasingly occurs online. Building upon the insights from the nudge theory, the IS research introduced the concept of digital nudging – a technique used by a choice architect to intentionally influence users' inputs and decisions via digital interface design.⁵⁷ While digital nudging can largely be viewed as a digital representation of the nudge, the unique characteristics of online environments, such as personalisation or automated real-time adjustment possibilities distinguish it from the analogue.⁵⁸

Hypernudging is one of the most sophisticated forms of digital nudging that allows for dynamically personalised user steering, where the aim is to reach the right user, with the right message, by the right means, at the right time, as many times as needed. This process may be visualised as a staircase: it is no longer about a single step placed by the choice architect to steer the user, but multiple steps that might come in different shapes, at different times, all with the goal to gently push them towards a specific outcome. As the design of these “steps” is informed by the deep knowledge about users' preferences and characteristics, the choice architect is able to lead them in a way that is not experienced as forced.

⁵² Jonathan Cribb and Carl Emmerson, 'What happens when employers are obliged to nudge? Automatic enrolment and pension saving in the UK' (2016) IFS Working Paper W16/19, 10.

⁵³ 'When push comes to shove: Nudge theory and organ donation' <<https://decisionresourcesgroup.com/blog/push-comes-shove-nudge-theory-organ-donation>> 16 June 2021.

⁵⁴ The Behavioural Insights Team, 'Publications' <<https://www.bi.team/our-work/publications/>> accessed 16 June 2021.

⁵⁵ See, among others: Daniel M Hausman and Brynn Welch, 'Debate: To nudge or not to nudge' (2010) 18(1) *Journal of Political Philosophy* 123; Cass R Sunstein, *Why nudge? The politics of libertarian paternalism* (Yale University Press 2014); Mark D White, *The manipulation of choice: Ethics and libertarian paternalism* (Springer 2013).

⁵⁶ Marijn Sax, *Between empowerment and manipulation: The ethics and regulation of for-profit health apps* (Proefschrift-aio.nl 2021) 39.

⁵⁷ Markus Weinmann, Christoph Schneider, and Jan Vom Brocke, 'Digital nudging' (2016) 58(6) *Business & Information Systems Engineering* 433, 435.

⁵⁸ Tim-Benjamin Lembcke and others, 'Towards a unified understanding of digital nudging by addressing its analog roots' (Pacific Asia Conference on Information Systems (PACIS), Xi'an, 8-12th July 2019) 7 <<https://aisel.aisnet.org/pacis2019/123/>> accessed 19 August 2023; Schöbel S and others, 'Understanding user preferences of digital privacy nudges—a best-worst scaling approach' (53rd Hawaii International Conference on System Sciences, Maui, 7-10 January 2020) 3919 <<https://scholarspace.manoa.hawaii.edu/items/ad77e083-3033-4671-8c3e-08dfc873d99f>> accessed 19 August 2023.

The argument of this article is unravelled by evaluating digital advertising as a form of hypernudging whilst placing it within the consolidated hypernudging framework. The framework consists of cumulative criteria based on behavioural economics-informed nudge theory, the Human-Computer Interaction (HCI) literature on digital nudging, and unique elements of hypernudging, as coined in the interdisciplinary law and informatics literature. Each criterion will be explained and compared with the features of local search advertising and integrated advertising campaigns, illustrating weaker to strong hypernudging opportunities via digital advertising.

Basis	Hypernudging criterion
Behavioural economics grounded nudge theory	1. Aspect of choice architecture
	2. Does not prohibit options
	3. Does not significantly change economic incentives
	4. Intentional
	5. Use of psychological insights
HCI digital nudging literature	6. Delivered via digital interfaces
HCI personalised digital nudging literature and hypernudging as coined in the interdisciplinary law and informatics perspective	7. Personalised
	8. Dynamic
	9. Predictive

Table 1: Consolidated hypernudging framework

3.2. Leading Consumers With(in) Google Maps App

Google Maps is arguably the most popular and far-reaching maps service of all time.⁵⁹ For centuries, cartography science has been used to graphically represent geographical areas.⁶⁰ The advent of the digital technologies promoted an alternative configuration of mapping, which adopted the features of digital platforms, such as programmability, modularity and openness to multiple forms of participation.⁶¹ The idea behind setting up Google Maps was to add a geographical dimension to Google's capital accumulation strategy of collecting data of users with Google services and monetising these data through advertising-side of the business.⁶² More and more pieces of data are now being tagged with geographic references, and online maps not only help users to navigate

⁵⁹ Timothy E Ström, 'Journey to the centre of the world: Google Maps and the abstraction of cybernetic capitalism' (2020) 27(4) *Cultural Geographies* 561, 565.

⁶⁰ Eric Gordon, 'Mapping digital networks: From cyberspace to Google' (2007) 10(6) *Information, Communication & Society* 885, 886.

⁶¹ Jean-Christophe Plantin, 'Digital traces in context| Google maps as cartographic infrastructure: From participatory mapmaking to database maintenance' (2018) 12 *International Journal of Communication* 489, 490.

⁶² Craig M Dalton, 'For fun and profit: The limits and possibilities of Google-Maps-based geoweb applications' (2015) 5 *Environment and Planning* 1029, 1038.

through the world, but also through this wealth of information.⁶³ Currently, the service includes information about, but not limited to, relevant business outlets, discounts and customer reviews, with the underlying goal of providing users with the desired information within a one-app ecosystem.⁶⁴ Google Maps is also slowly morphing into a service of discovery, contributing to Google's ability to position itself as the "co-pilot" of users' decisions offline.⁶⁵

With the rise of smartphones, Google Maps has become an essential app for millions of users.⁶⁶ Google Maps Application Programming Interface ("API") is used to power so many applications that it constitutes a *de facto* standard for online maps. Google's domination in contemporary popular cartography is driven by the company's position as the world's number one online search-engine, as well as default navigation app on its Android operating system, which captures 86% of smartphones globally.⁶⁷

Advertising services on Google Maps currently feature local search ads and promoted pins that primarily target the user based on their location information.⁶⁸ Local search ads refer to the top two results that show up after the user poses a query on the app and are accompanied with a purple "Ad" tag. Promoted pins are purple location pins designed to stand out from the ordinary red pins and are accompanied with a business logo. They are basically a local version of paid search ads and are used to increase physical footfall – consumers are targeted directly based on their searches for the business type, as well as the product or service that they are trying to find.⁶⁹ The advertiser is charged a standard PPC.⁷⁰

Local search advertising on Google Maps app is a subtype of search advertising for which the advertiser would generally use Google Search Network.⁷¹ Considering Google's sustained and substantive market share indicating market power on search advertising market and online maps services, it is plausible to examine whether local

⁶³ Sébastien Caquard, 'Cartography I: Mapping narrative cartography' (2013) 37(1) *Progress in Human Geography* 138.

⁶⁴ David Oragui, 'How to advertise on Google Maps' (*The Manifest*, 7 August 2018) <<https://themanifest.com/mobile-apps/how-advertise-google-maps>> accessed 16 June 2021.

⁶⁵ Shoshana Zuboff, *The age of surveillance capitalism: The fight for a human future at the new frontier of power* (Profile Books 2019), 149.

⁶⁶ Craig M Dalton and Jim Thatcher, 'Seeing by the Starbucks: The social context of mobile maps and users' geographic knowledges' (2019) 92 *Cartographic Perspectives* 24.

⁶⁷ Ström (n 59), 566.

⁶⁸ Ibid, 569.

⁶⁹ Jordan Choo, 'Promote your franchise with Google Maps promoted pins', *Cogneta* <<https://kogneta.com/get-ready-aggressively-promote-local-franchises-google-maps/>> accessed 30 June 2021.

⁷⁰ 'Attract new customers with local ads on the Google Maps app', *Google inside AdWorlds* <<https://adwords.googleblog.com/2013/08/attract-new-customers-with-local-ads-on.html>> accessed 30 June 2021.

⁷¹ 'Show local search ads on Google Maps', Google Ads Support, Google <https://support.google.com/google-ads/answer/7040605?hl=en&ref_topic=3121771> accessed 30 June 2021.

search advertising could be considered a form of hypernudging. This is going to be done by comparing its features to the characteristics of hypernudging.

1. *Aspect of choice architecture*

Hypernudging is implemented by designing elements of users' decision-making context. This requirement is met as for a user that posed a search query, Google Maps user interface is the choice environment that presents them with decision-making options.

2. *Does not prohibit options*

For a practice to constitute hypernudging, it must not prohibit any options.⁷² However, by harnessing knowledge about users' specific circumstances and characteristics, it may impose *cognitive constraints* that hinder the exercise of a user's meaningful choice. Local advertising satisfies this criterion as users are not coerced to click on the ad, nor are they obliged to deviate from their preferred route towards promoted outlets. Nevertheless, the sheer volume of information (and options) on the Internet makes it costly to assess different presented alternatives – users' ability to understand the complete choice-set is hindered by cognitive constraints. Thus, the ordering of information affects the perception of the choice-set, allowing Google to exercise perception control over the user.⁷³

3. *Does not significantly change economic incentives*

Hypernudging should not significantly affect users' economic incentives, though the wording implies that limited adjustment is possible. The local search ads are targeted based on users' data, including their demographics, but also behaviour, online habits and interests. Users "feed" Google's algorithm with this information, including data that allows deducing their economic incentives. When targeting users, Google is motivated to match specific users' economic incentives and budgetary constraints, instead of attempting to actively change them, as this increases the likelihood of "a click", resulting in collection of a fee from advertisers.⁷⁴ The matching, however, is not expected to be perfect, as the algorithm cannot take into account the unexpected events that have a financial impact on users in real life. This implies that in most cases the economic incentives will not be "significantly" changed, though with commercial ads a case-by-case assessment may be required.

⁷² Lembecke and others (n 58), 10.

⁷³ Christian Meske and Tobias Potthoff, 'The DINU-model – a process model for the design of nudges' (25th European Conference on Information Systems (ECIS), Guimarães, 5-10 June 2017) 2593 <https://aisel.aisnet.org/ecis2017_rip/11/> accessed 19 August 2023; Jamie Susskind, *Future politics: Living together in a world transformed by tech* (Oxford University Press 2018) 142-143.

⁷⁴ Tom Simonite, 'Google and Microsoft can use AI to extract many more ad dollars from our clicks' (*WIRED*, 31 August 2017) <<https://www.wired.com/story/big-tech-can-use-ai-to-extract-many-more-ad-dollars-from-our-clicks/>> accessed 16 June 2021.

4. *Intentional*

Hypernudging is meant to lead users towards choice architects' intended outcomes.⁷⁵ Google's intention behind showing a particular ad is to entice the user to click on it, as the company gets paid a standard PPC rate.⁷⁶ The company is further incentivised to present ads that would lead to a desired transaction by the advertiser. This is because advertisers' expenditure is influenced by the return of investment (ROI) and how many of the clicks they paid for actually translated into a purchase. However, it is not self-evident that Google has an incentive to steer a user to a *specific* advertiser's offering (or outcome). In principle, any would do as long as the user clicks on the ad. Hence, "the intentionality for what" is the contentious issue here: in a broad sense, Google is intentional in showing the targeted ads that lead to the auction-winner's website. In a narrower sense, it is not clear that there is a preference-induced intention to steer users towards specific market outcomes. The requirement, therefore, is satisfied only in a weak sense.

5. *Use of psychological insights*

The mechanisms used in hypernudging work by harnessing users' cognitive boundaries, personal characteristics and habits, instead of trying to rationally persuade or coerce them.⁷⁷ Digital advertising on Google Maps is attractive to advertisers because users reveal their intentions in their search query.⁷⁸ The ads and recommendations are not expected to be off what the user was looking for – it is not irrational for the user to click on them. The use of psychological insights, however, comes with the ordering and ranking of available information, as searchers' behaviour is influenced by the framing of options.⁷⁹ The selection of specific ads may also be based on users' data that allows the algorithm to deduce their specific context. With developments in the emotion analytics field, it is not unlikely for consumer targeting to evolve towards

⁷⁵ Karen Yeung, 'The forms and limits of choice architecture as a tool of government' (2016) 38(3) *Law & Policy* 186, 187; Lembcke and others (n 44), 4.

⁷⁶ Ibid.

⁷⁷ Distinction should be made between nudging and persuasion, the latter focusing on a technically enabled influence. See Brian J Fogg, *Persuasive technology: Using computers to change what we think and do* (Morgan Kaufmann Publishers 2013); Lembcke and others (n 58), 10; Henrik Skaug Saetra, 'When nudge comes to shove: Liberty and nudging in the era of big data' (2019) 1 *Technology and Society* 101.

⁷⁸ Carsten D Schultz, 'Informational, transactional, and navigational need of information: Relevance of search intention in search engine advertising' (2020) 23(2) *Information Retrieval Journal* 118.

⁷⁹ Lori Lorigo and others, 'Eye tracking and online search: Lessons learned and challenges ahead' (2008) 59(7) *Journal of the American Society for Information Science and Technology* 1041, 1044; Bing Pan and others, 'In Google we trust: Users' decisions on rank, position, and relevance' (2008) 12(3) *Journal of Computer-Mediated Communication* 801.

catering for users' moods and personal characteristics, such as impulsiveness, creating opportunities to push their internal triggers.⁸⁰

In addition, local search advertising may play on users' perceived sense of urgency: if a user was browsing the web to search for a product X but did not want to commit to a purchase online, having a promoted pin with a discount on the way to their destination may work as a powerful nudge. Similar advertising techniques were tested out on Waze (now acquired by Google). In 2013, Taco Bell placed ads on Waze for the 12 pack for each Saturday morning thinking that people using Waze at that time were likely to get it on the way to watch college football. The campaign has proven to be successful, as Taco Bell managed to provide an attractive and relevant offer at the right point in time.⁸¹ In this example, Taco Bell used the same tactic on consumers universally, and when it comes to dynamically personalised predictive promoted pins, the potency of steering is expected to be higher.⁸²

The use of psychological insights does not imply that the user *must* be manipulated by the choice architect – users are not just puppets on a string. The more savvy web search users expect to be flooded with ads, thereby limiting their effectiveness in surpassing users' rationality. Some push back by using ad-blockers that reduce the inconvenience of digital advertising or by following the platform's manual procedures to turn off sponsored ads from certain providers.⁸³

6. *Delivered via digital interfaces*

Hypernudging is delivered by using complex artificial intelligence and machine learning algorithms, thereby necessitating a digital interface. Google Maps user interface satisfies this requirement.

⁸⁰ Consider the nascent field of “emotion analytics”, which focuses on identifying and analysing the full spectrum of human emotions including mood, attitude and emotional personality: Yuval Mor, ‘Emotions analytics to transform human-machine interaction’ (*WIRED*, 2013) <<https://www.wired.com/insights/2013/09/emotions-analytics-to-transform-human-machine-interaction/>> accessed 30 June 2021; Tom Kelshaw, ‘Emotion analytics: A powerful tool to augment gut instinct’ (2017) Think with Google, Google <<https://www.thinkwithgoogle.com/intl/en-154/marketing-strategies/data-and-measurement/emotion-analytics-powerful-tool-augment-gut-instinct/>> 30 June 2021.

⁸¹ ‘Google’s newest secret weapon for local ads’, *Digiday* <<https://digiday.com/media/waze-advertisers/>> accessed 30 June 2021.

⁸² Anindya Ghose, Beibei Li, Siyuan Liu, ‘Mobile targeting using customer trajectory patterns’ (2019) 65(11) *Management Science* 5027.

⁸³ See Simon Anderson and Joshua S Gans, ‘Platform siphoning: Ad-avoidance and media content’ (2011) 3(4) *American Economic Journal: Microeconomics* 1; ‘Block certain ads’, Google Ads Help, Google <<https://support.google.com/ads/answer/2662922?hl=en>> accessed 30 June 2021.

7. *Personalised*

Hypernudging is tailored to each user based on their specific characteristics and circumstances (such as preferences, capabilities and opportunities).⁸⁴ (Local) search advertising is generally considered a type of personalisation strategy.⁸⁵ Possibilities to personalise ads to granular segments of audiences, or even individuals, is reflected in Google's audience targeting metrics⁸⁶ and personalisation policy.⁸⁷ Furthermore, the localisation of advertising messages for smartphone users creates opportunities to target them based on their mobile device's location at a particular time.⁸⁸ However, as Google Maps provides a single channel for advertising, it does not take into account where the consumer would be most receptive to the message. Thus, without being able to personalise the means of message delivery, this criterion is met, although it may be strengthened.

8. *Dynamic*

Dynamism in context of hypernudging involves adjusting digital choice environments based on specific users' behaviour in real-time.⁸⁹ Dynamic personalisation is a quality of search ads – the same user posing a different search query is expected to receive different ads. Moreover, from the user's perspective, Google Maps operates in a highly blended choice architecture where online and offline are closely entwined.⁹⁰ Google Maps allows the user to make sense of the real world – both environments do not only co-exist, they go hand in hand, as the user will trust the online visualisation and directions to reach their offline destination. The directions are adjusting in real-time, responding to users' changing location and needs: would the user deviate from the proposed path, Google Maps would react with a new recommendation.⁹¹ The presented ads adjust too, rendering the choice architecture dynamic.

⁸⁴ Sandor Dalecke and Randi Karlsen, 'Designing dynamic and personalized nudges' (The 10th International Conference on Web Intelligence, Mining and Semantics, Biarritz, 30 June – 3 July 2020) 140 <<https://dl.acm.org/doi/10.1145/3405962.3405975>> accessed 19 August 2023; Lanzing (n 3), 554.

⁸⁵ Christian Schlee, *Targeted advertising technologies in the ICT space* (Springer Vieweg 2013) 9-59.

⁸⁶ 'About audience targeting', *Ads Help, Google*. Available at: <<https://support.google.com/google-ads/answer/2497941?hl=en>> accessed 11 January 2021.

⁸⁷ 'Personalized advertising', *Advertising Policies Help, Google*. Available at: <<https://support.google.com/adspolicy/answer/143465?hl=en>> 11 January 2021.

⁸⁸ Nancy J King and Pernille Wegener Jessen, 'Profiling the mobile customer – Privacy concerns when behavioural advertisers target mobile phones – Part I' (2010) 26(5) *Computer Law & Security Review* 455.

⁸⁹ Lanzing (n 3), 553.

⁹⁰ On blended environments: Urte Undine Frömming and others, 'Digital environments and the future of ethnography. An introduction', in Urte Undine Frömming and others (eds) *Digital environments: ethnographic perspectives across global online and offline spaces* (transcript 2017) 13.

⁹¹ Yeung (n 3).

9. *Deductive/predictive*

Hypernudging is deployed based on the inferences about users' inner trigger points (personality, values, emotions) from their data. In digital advertising, statistical predictions are generally used to enrich users' profiles.⁹² With the developments in predictive analytics, it is now possible to deduce individuals' personality traits based on their web search behaviour such as "the number of keywords one uses, click habits, the number of repetitions [and] dwell time".⁹³ Even though the accuracy of such deductions and predictions is not perfect, in general digital search advertising satisfies this requirement.

Basis		Hypernudging criterion	Local search advertising
Behavioural economics grounded nudge theory	1.	Aspect of choice architecture	Yes
	2.	Does not prohibit options	Yes
	3.	Does not significantly change economic incentives	Yes
	4.	Intentional	Yes (Weak)
	5.	Use of psychological insights	Yes
HCI digital nudging literature	6.	Delivered via digital interfaces	Yes
HCI personalised digital nudging literature and hypernudging as coined in the interdisciplinary law and informatics perspective	7.	Personalised	Yes
	8.	Dynamic	Yes
	9.	Predictive	Yes

Table 2: Comparison of hypernudging with local search advertising

The above assessment has shown that local search advertising on Google Maps meets the criteria relevant for a practice to constitute a form of hypernudging. While most of the requirements are clearly satisfied, some uncertainties remain. Intentionality is imperative in order for a choice architect – in this case, Google – to hypernudge users towards specific pre-defined outcomes. It is not clear whether it is sufficient to merely steer the user to click on an ad, or whether the company should engage in international steering towards favoured ads. Furthermore, while Google Maps user interface could be considered a dynamically personalised choice architecture, it does not take into account whether the user is receptive to this type of advertising. Thus, while Google Maps allows to target the right user, by the right message, at the right time, it might miss the mark as to the right means of delivery. The opportunities to take into account the mix of ads arise with integrated advertising campaigns, which will be assessed next.

⁹² Schlee (n 85), 9-59.

⁹³ Dong Nie and others, 'Your search behaviour and your personality' in Qiaohong Zhu, Maria Vargas-Vera and Bo Hu (eds) *Pervasive computing and the networked world* (Springer Cham 2013) 459-470.

3.3. Integrated Advertising Campaigns

Integrated advertising campaigns combine multiple channels of advertising such as search and display ads in order to promote a consistent message to a specific audience.⁹⁴ The goal is to convert viewers into customers by pinpointing where in the purchasing funnel – a staged process that a customer takes to buy a product – the consumer is and adjusting the message accordingly.⁹⁵ It involves coordinating the elements of advertising mix to create synergies between them.⁹⁶ Just as the most sophisticated hypernudging processes, integrated advertising campaigns are no longer about a specific ad delivered to the right user in a particular moment – they are about multiple ads, delivered via multiple channels over time to gently steer them towards a specific transaction.

Currently, most of the digital advertising campaigns are delivered via programmatic advertising, which has introduced new opportunities to reach the right user profile with the right message, time, quality, location and price of the offer.⁹⁷ This is made possible by the “constant collection and updating of user data from campaigns and digital platforms, matched with real time optimization”⁹⁸, thereby unlocking personalisation and relevancy potential. Programmatic technology facilitates automated processes that entail real-time ad creation based on real-time information, all serving to steer consumer behaviour based on their specific context.⁹⁹

As discussed earlier (see section 2.1), Google is a systemic market actor within each layer of digital advertising value chain. With regard to integrated advertising campaigns, Google offers a number of products and services designed to allow advertisers to reach their audiences in an efficient and effective manner. Take the example of Google’s Display and Video 360 (DV360) – a DSP that enables advertisers to manage their programmatic campaigns across display, video, TV, audio and other channels in one place.¹⁰⁰ It provides a consolidated approach to advertising, where business users are able to reach more unique consumers as well as different inventory sources and transaction types whilst saving time and streamlining administration.¹⁰¹

⁹⁴ ‘Digital marketing terms, integrated campaign’. *Campaign Monitor* <<https://www.campaignmonitor.com/resources/glossary/integrated-campaigns/>> accessed 30 June 2021.

⁹⁵ Bernard J Jansen and Simone Schuster, ‘Bidding on the buying funnel for sponsored search and keyword advertising’ (2011) 12(1) *Journal of Electronic Commerce Research* 1; Catherine Seda, *Search engine advertising: Buying your way to the top to increase sales* (New Riders 2004).

⁹⁶ Bob M Fennis and Wolfgang Stroebe, *The psychology of advertising* (Routledge 2020) 27.

⁹⁷ Oliver Gertz and Deirdre McGlashan, ‘Consumer-centric programmatic advertising’ in Oliver Busch (ed) *Programmatic advertising* (Springer International Publishing 2016) 58.

⁹⁸ Andy Stevens, Andreas Rau, and Matthew McIntyre, ‘Integrated campaign planning in a programmatic world’, in Oliver Busch (ed.) *Programmatic advertising* (Springer International Publishing 2016) 193.

⁹⁹ Busch (n 14), 8.

¹⁰⁰ ‘Display & video 360’, Product Overview, Google, 1 <https://services.google.com/fh/files/misc/display_and_video_360_product_overview.pdf> accessed 29 June 2021.

¹⁰¹ *Ibid*, 3.

Taking multi-channel advertising campaigns a step further, Google not only encourages integrating its other services such as Google Analytics or Google Cloud, it offers a Google Marketing Platform which unifies advertising and analytics services together.¹⁰²

While, in light of the hypernudging framework, digital advertising via integrated advertising campaigns shares a number of characteristics similar to single channel advertising such as local search advertising on Google Maps, by reaching the right user with various types of ads over prolonged periods of time it exhibits at least two qualitative differences rendering such digital advertising a strong form of hypernudging.

Firstly, the design of integrated advertising campaigns allows evoking stronger psychological responses from the consumer. Take the example of priming – a technique that engages people to a task or exposes them to stimuli. It consists of meanings that evoke associated memories and in turn may influence people’s behaviour.¹⁰³ By showing ads across different channels, the advertiser may be able to trigger consumers’ “mental playback” so that they remember a related message from another channel. When consumers observe the same information across different sources over time, they may perceive it as more credible.¹⁰⁴ Furthermore, with constant user targeting, advertisers may be able to create a sense of brand familiarity.¹⁰⁵ People tend to choose familiar brands over novelty, and repeating the same, differently formulated message via multiple channels over time may help to achieve that.¹⁰⁶

Secondly, programmatically delivered integrated advertising campaigns are highly personalised. For instance, possibilities for creative dynamic optimisation (CDO) allow advertisers to easily swap out creative content with the goal to deliver messages crafted to specific users.¹⁰⁷ Moreover, it is no longer only about the right user receiving the right message at the right time; individuals can be targeted by the right means depending on

¹⁰² ‘Google marketing platform’, Google <<https://marketingplatform.google.com/about/>> accessed 29 June 2021.

¹⁰³ ‘Priming (conceptual)’, behaviouraleconomics.com <[https://www.behaviouraleconomics.com/resources/mini-encyclopedia-of-be/priming-conceptual/#:~:text=Priming%20\(Conceptual\)behaviouralecon2019%2D,%2C%20attitudes%2C%20etc](https://www.behaviouraleconomics.com/resources/mini-encyclopedia-of-be/priming-conceptual/#:~:text=Priming%20(Conceptual)behaviouralecon2019%2D,%2C%20attitudes%2C%20etc)> accessed 29 June 2021; Alain Cohn and Michel A Maréchal, ‘Priming in economics’ (2016) 12 *Current Opinion in Psychology* 17.

¹⁰⁴ Lawrence Ang, *Principles of integrated marketing communications* (Cambridge University Press 2021) 6.

¹⁰⁵ Jairene Cruz-Eusebio, ‘Encourage purchase through the mere exposure effect or the familiarity principle’ (*Brax*, 24 March 2021) <<https://www.brax.io/blog/the-magic-of-the-mere-exposure-effect-or-the-familiarity-principle>> accessed 29 June 2021.

¹⁰⁶ William Baker, J. Hutchinson, Danny Moore, and Prakash Nedungadi, ‘Brand familiarity and advertising: Effects on the evoked set and brand preference’ (1986) *ACR North American Advances* 301.

¹⁰⁷ ‘About dynamic creatives’, Studio Help, Google <<https://support.google.com/richmedia/answer/2691686?hl=en>> accessed 29 June 2021; Gertz and McGlashan (n 97), 65-66.

what that specific user is receptive to in a given moment. Considering Google’s user base and potential for data synergies across its many business domains, identifying how and when the user should receive a particular message is, at the very least, plausible.

Basis	Hypernudging criterion	Integrated advertising campaign
Behavioural economics grounded nudge theory	1. Aspect of choice architecture	Yes
	2. Does not prohibit options	Yes
	3. Does not significantly change economic incentives	Yes
	4. Intentional	Yes (Weak)
	5. Use of psychological insights	Yes (Strong)
HCI digital nudging literature	6. Delivered via digital interfaces	Yes
HCI personalised digital nudging literature and hypernudging as coined in the interdisciplinary law and informatics perspective	7. Personalised	Yes (Strong)
	8. Dynamic	Yes
	9. Predictive	Yes

Table 3: Comparison of hypernudging with integrated advertising campaigns

Nevertheless, just as with local search advertising on Google Maps, the hypernudging requirement of intentionality in integrated advertising campaigns remains satisfied in a weak sense. While Google has an incentive and intent to present users with ads that make them “click”, it is not clear that there is an intention to point them towards specific advertisers’ content. Therefore, hypernudging via digital advertising as examined up to this point is a relatively neutral practice, guided by the market dynamics of supply and demand for ads. The next section will elaborate why the platform’s economic imperatives – or intentions – matter in this context and the circumstances in which hypernudging may lead to harmful market outcomes.

4. Hypernudging within digital advertising markets: Consumer harm?

The possibility offered by a platform such as Google to reach the right user, with the right message, by the right means and at the right time carries the promise of more effective targeting, which leads to better click-through rates and – ultimately – sales.¹⁰⁸ In (local) search advertising, Google holds significant market power that allows it to

¹⁰⁸ Note, the effectiveness and welfare effects of digital advertising are inconclusive: Marc Bourreau, Alexandre de Streel and Inge Graef, ‘Big Data and competition policy: Market power, personalised pricing and advertising’ (2017) <<https://ssrn.com/abstract=2920301>> accessed 10 August 2023; on effectiveness: Steffen Förch and Evert de Haan, ‘Targeting online display ads: Choosing their frequency and spacing’ (2018) 35(4) *International Journal of Research in Marketing* 661; Alexander Bleier and Maik Eisenbeiss, ‘The importance of trust for personalized online advertising’ (2015) 91(3) *Journal of Retailing* 390.

orchestrate the interactions between market players on the user- and advertiser-side of the market. From the market perspective, this is not a cause for concern, as long as there are no harms associated with market failures.¹⁰⁹ However, Google's position of power, coupled with the complex and opaque mechanisms that drive the digital advertising market, creates opportunities for hypernudging that may result in market manipulation and consumer harm. This section will assess the challenges of hypernudging through the lens of both the market and the user, highlighting the entwinedness and reinforcing qualities of both sides of the market. It will further examine whether these effects may be addressed by European competition law – a legal field concerned with curbing the negative effects of market power.

4.1. Intermediation bias and systemic market manipulation

Google is a systemic market actor on the user- and advertiser-facing sides of the business. When it comes to local search advertising on Google Maps, the market is concentrated; similarly, Google holds a strong market position within the online advertising technology sector.¹¹⁰ This means that Google's design of choices shapes market players' economic interactions in this space. From a public policy perspective, it is imperative to question whether concentration in such markets can also lead to sub-optimal design of these choices.¹¹¹ The overarching concern of hypernudging via digital advertising is the potential for systemic market manipulation. The concept was developed by Hanson and Kysar and refers to a situation where, due to the presence of unyielding cognitive biases, individual decision-makers become susceptible to manipulation by *those* who are able to influence the choice environment in which their decisions are made.¹¹² In the context of Google, by using data insights into individual users' cognitive processes and controlling the supply of ads, the platform may systemically steer market outcomes towards its own profit-driven objectives. For market manipulation to occur, hypernudging should be driven by the platform's bias.¹¹³

Generally, Google has the incentive to offer users most relevant recommendations because they can capture part of the value that has been created for both the consumer

¹⁰⁹ Robert Baldwin, Martin Cave, and Martin Lodge, *Understanding regulation: Theory, strategy, and practice* (2nd edn, Oxford University Press 2012).

¹¹⁰ Commission, 'Antitrust: Commission opens investigation into possible anticompetitive conduct by Google in the online advertising technology sector' (22 June 2021) <https://ec.europa.eu/commission/presscorner/detail/en/ip_21_3143> accessed 19 August 2023.

¹¹¹ Emilio Calvan and Michele Polo, 'Market power, competition and innovation in digital markets: A survey' (2020) 100853 *Information Economics and Policy* 8.

¹¹² Jon D Hanson and Douglas A Kysar, 'Taking behaviouralism seriously: The problem of market manipulation' (1999) 74 *New York University Law Review* 635; Ryan Calo, 'Digital market manipulation' (2013) 82 *George Washington Law Review* 1001.

¹¹³ Sophia Gaenssle and Oliver Budzinski, 'Stars in social media: New light through old windows?' (2020) 1 *Journal of Media Business Studies* 9.

and businesses that are being intermediated.¹¹⁴ However, due to the information overload character of the available content and user-dependency on the algorithmic pre-selection of that content, the platform may inject profit-driven interests into their algorithm management.¹¹⁵ This may lead to intermediation biases that result in consumer harm, both by providing them with poorer offerings on the platform and by distorting competition in the relevant downstream market, for instance by favouring a downstream affiliate partner.¹¹⁶

Challenges arising from intermediation bias are familiar to European competition law. These include self-preferencing and favouritism behaviour by dominant market players, which may lead to foreclosure of competitors to the detriment of consumers.¹¹⁷ The European Commission has already sanctioned Google for exclusionary conduct in a saga of abuse of dominance decisions.¹¹⁸ Each investigation showcased how Google's ability to integrate different activities across its business domains fosters a relationship of economic dependency vis-à-vis business users and final consumers, thereby creating room for abusive behaviour.¹¹⁹ Decisions also considered the systemic effects of algorithmic design choices on user behaviour in facilitating such anticompetitive outcomes.¹²⁰

Hypernudging via digital advertising could be considered another potentially harmful manifestation of Google's market power. While quantification of the prevalence of biases and consumer harm is unviable, as it is hidden within Google's proprietary

¹¹⁴ Ibid.

¹¹⁵ Ibid.

¹¹⁶ Richard Feasey and Jan Krämer, 'Implementing effective remedies for anti-competitive intermediation bias on vertically integrated platforms' (2019) Centre on Regulation in Europe asbl (CERRE) 5; Alexandre De Corniere and Greg Taylor, 'A model of biased intermediation' (2019) 50(4) *The RAND Journal of Economics* 858; Bernhard Rieder and Guillaume Sire, 'Conflicts of interest and incentives to bias: A microeconomic critique of Google's tangled position on the web' (2014) 16(2) *New Media & Society* 205.

¹¹⁷ Jorge Padilla, Joe Perkins, and Salvatore Piccolo, 'Self-preferencing in markets with vertically-integrated gatekeeper platforms' (2020) <<https://ssrn.com/abstract=3701250>> accessed 9 August 2023; Nicolas Petit, 'Theories of self-preferencing under Article 102 TFEU: A reply to Bo Vesterdorf' (2015) *Competition Law & Policy Debate* 1; Commission, 'Antitrust: Commission fines Google € 2.42 billion for abusing dominance as search engine by giving illegal advantage to own comparison shopping service' (27 June 2017) <https://ec.europa.eu/commission/presscorner/detail/es/MEMO_17_1785> accessed 21 August 2023.

¹¹⁸ *Google Search (Shopping)* (Case AT.39740) Commission Decision C(2017) 4444 final [2017] OJ C 9/11AT.40411; *Google Android* (Case AT.40099) Commission Decision C(2018) 4761 final [2019] OJ C402/19; *Google Search (AdSense)* (n 36).

¹¹⁹ *Google Search (Shopping)* (n 118), paras 158-159, 341; *Google Android* (n 118), paras 105-111, 458, 1016; *Google Search (AdSense)* (n 36), paras 330-332.

¹²⁰ Nicolo Zingales, 'Google Shopping: Beware of 'self-favouring' in a world of algorithmic nudging' (2018) *Competition Policy International-Europe Column* 3; *Google Search (Shopping)* (n 119), paras 454-457, 461, 491-494; *Google Android* (n 118), paras 781-782, 918.

data, recent investigations into ad tech markets offer a glimpse into the issues.¹²¹ For example, Google has been accused of impeding interoperability and self-preferencing its own ad tech services.¹²² The company is able to prioritise its products and services when competing with other advertisers for relevant keywords.¹²³ Furthermore, concerns have been raised over the “two-class society of advertisers” because of “Preferred Deal” and private auction options.¹²⁴ The recent investigation into Google’s behaviour in the search advertising market also uncovered hidden market sharing and preferential deals, granting data and speed advantages to some business users, including Facebook.¹²⁵

While Google is subject to on-going antitrust investigations on both sides of the Atlantic, drawing concrete conclusions about biased ad market intermediation is premature. However, the pre-requisite for reducing uncertainties is close market scrutiny over time. This may be facilitated by transparency obligations imposed by regulatory regimes, including the recent Digital Markets Act proposal.¹²⁶

4.2. Individual Perception Control and Limitation of Choice

Central to market manipulation concerns is systemic behaviour by individual users.¹²⁷ By virtue of controlling the filtering process of what the user is exposed to – be it publishers’ content or ads – Google is in a position to exercise perception control over the individual and hypernudge them towards specific market outcomes.¹²⁸ Thus, when a user is navigating through an unfamiliar territory with the help of Google Maps, their perception of surroundings and their importance will depend on what the company’s algorithm chooses to reveal, and in what way. The crude result of such perception control is *de facto* limitation of consumer choice: you cannot choose what you cannot see; taking a step further, you cannot want what you do not know exists.

There is a negative connotation associated with limitation of choice, as it appears axiomatic that more choice is always better. However, the research reveals that adding more alternatives to the choice-set increases satisfaction only up to a certain point

¹²¹ CMA (n 7); The ACCC (n 17); Fourberg and others (n 5); *Google Search (AdSense)* (n 36).

¹²² Fourberg and others (n 5), 45; Commission (n 111).

¹²³ Srinivasan (n 18).

¹²⁴ Fourberg and others (n 5), 26.

¹²⁵ The State of Texas and others, ‘Complaint against Google’ (16 December 2020), para 14 <https://www.texasattorneygeneral.gov/sites/default/files/images/admin/2020/Press/20201216%20COMPLAINT_REDACTED.pdf> accessed 29 June 2021.

¹²⁶ Mike Ananny, and Kate Crawford, ‘Seeing without knowing: Limitations of the transparency ideal and its application to algorithmic accountability’ (2018) 20(3) *New Media & Society* 973, 978.

¹²⁷ Hanson and Kysar (n 112); Jon D Hanson and Douglas A Kysar, ‘Taking behaviouralism seriously: Some evidence of market manipulation’ (1999) *Harvard Law Review* 1420.

¹²⁸ Susskind (n 73), 142-143.

due to the increased decision-making costs – or, cognitive overload.¹²⁹ This choice paradox is particularly acute in online spaces, where users are exposed to a large set of alternatives for each search query, thereby necessitating some form of information sorting to allow them to dedicate more of their attention towards the most important decisions in life – it may be welfare- and autonomy-enhancing.¹³⁰ In fact, algorithmic systems can teach us things we do not know about ourselves: they not only help to predict and shape, but also uncover deeply hidden preferences.¹³¹ Thus, limiting the choice of ads the user is exposed to may have positive effects. For instance, the increase in the number of consumer-product matches because of relevancy may elevate the social value of advertising.¹³²

The positive nature of choice limitation hinges on the premise that Google is a benevolent choice architect. However, with profit imperatives and potential intermediation bias at play, the company's goals may be inconsistent with users' preferences. As hypernudging is designed to hinder or even block individuals' reflection upon available options, for instance, through emotionally tailored messages, it carries behavioural manipulation potential.¹³³ Vast amounts of user data, at least theoretically, allow Google to identify exactly where in the purchasing funnel the consumer is. Deducting when the user is most likely to move further down the funnel and what type and form of messages induce the right response at a given moment is invaluable for leading them there. Automatic algorithmic systems may pick up on when the proposed offer is not working and recalibrate – the user can be retargeted later on. When it comes to influencing the user, it may no longer be about exposing them to a certain ad at one given point, but priming them at multiple moments, with multiple ads (and in the context of programmatic advertising – multiple business domains, see section 2.2) – all this ultimately leading to the same outcome. Thus, hypernudging may result in systemic diversion of consumer attention towards favoured ads, thereby negatively affecting consumer choice.¹³⁴

¹²⁹ Adi Ayal, 'Harmful freedom of choice: Lessons from the cellphone market' (2011) 74(2) *Law and Contemporary Problems* 94; Barry Schwartz and Andrew Ward, 'Doing better but feeling worse: The paradox of choice' (2014) *Positive Psychology in Practice* 86.

¹³⁰ Antti Oulasvirta, Janne P Hukkinen, and Barry Schwartz, 'When more is less: the paradox of choice in search engine use' (The 32nd International ACM SIGIR conference on research and development in Information Retrieval, Boston, 19-23 July 2009) <<https://dl.acm.org/doi/10.1145/1571941.1572030>> accessed 19 August 2023; Sunstein (n 50) paras 87-88.

¹³¹ Michal S Gal, 'Algorithmic challenges to autonomous choice' (2018) 25(1) *Michigan Technology Law Review* 59.

¹³² Dirk Bergemann and Alessandro Bonatti, 'Targeting in advertising markets: Implications for offline versus online media' (2011) 42(3) *The RAND Journal of Economics* 417.

¹³³ Robert Baldwin, 'From regulation to behaviour change: Giving nudge the third degree' (2014) 77(6) *The Modern Law Review* 837.

¹³⁴ Fourberg and others (n 5), 33.

European competition law is concerned with protecting the material welfare of society and with systemic large-scale hypernudging, the aggregate effects of limitation of choice may point towards anticompetitive market behaviour.¹³⁵ By taking advantage of users' behavioural inclinations and by imposing environmental constraints, the company might be engaging in exploitative practices. When such conduct results in direct harm to final consumers, it may fall within the scope of Article 102 TFEU prohibition.¹³⁶ However, exploitative abuses have not received much attention from competition authorities in the past, leading to uncertainties concerning its scope of application.¹³⁷ This can partially be explained by high burden of proof and overlaps with sector-specific regulation, which allowed the Commission to focus its priorities into investigating exclusionary abuses.¹³⁸

With the challenges brought by the consumer-centric digital economy, there seems to be a paradigm shift towards expanding the protection of consumers' interests and possibly reconfiguring the boundaries of European competition law enforcement.¹³⁹ Competition authorities are expected to be able to intervene in the presence of market failures, despite the overlap with other regulatory regimes, including data protection and consumer protection law.¹⁴⁰ A salient example is the German competition authority's decision on Facebook's data collection and processing practices, which were considered to constitute exploitative conduct.¹⁴¹ Upon appeal of the decision, the Higher Regional Court of Düsseldorf filed a request for a preliminary ruling from the European Court

¹³⁵ Kati Cseres, *Competition law and consumer protection*, vol. 49 (Kluwer Law International BV 2005) 311. However, as consumer welfare effects are mixed, hypernudging via digital advertising should not be prohibited, but assessed on a case-by-case basis. See: Marco Botta and Klaus Wiedemann, 'To discriminate or not to discriminate? Personalised pricing in online markets as exploitative abuse of dominance' (2020) 50(3) *European Journal of Law and Economics* 381.

¹³⁶ *Ibid.*, 389. See also: Pinar Akman, 'The role of Exploitation in Abuse in Article 82 EC' (2009) 11 *Cambridge Yearbook of European Legal Studies* 165, 167.

¹³⁷ Botta and Wiedemann (n 135), 390.

¹³⁸ *Ibid.*, 389.

¹³⁹ In particular, competition authorities placed much focus on the interplay between competition law and data protection, see: Case C-319/20 Request for a preliminary ruling from the Bundesgerichtshof (Germany) lodged on 15 July 2020 – *Facebook Ireland Limited v. Bundesverband der Verbraucherzentralen und Verbraucherverbände – Verbraucherzentrale Bundesverband e.V.* [2020] OJ C 359/2; Commission (n 111); Maureen K. Ohlhulsen and Alexander P. Okuliar, 'Competition, consumer protection, and the right [approach] to privacy' (2015) 80 *Antitrust Law Journal* 121; Viktoria HSE Robertson, 'Excessive data collection: Privacy considerations and abuse of dominance in the era of big data' (2020) 57(1) *Common Market Law Review* 161; Giuseppe Colangelo and Mariateresa Maggiolino, 'Data accumulation and the privacy-antitrust interface: Insights from the Facebook case' (2018) 8(3) *International Data Privacy Law* 224; Miriam C Buiten, 'Exploitative abuses in digital markets: Between competition law and data protection law' (2020) *Journal of Antitrust Enforcement* 1.

¹⁴⁰ Botta and Wiedemann (n 135), 390.

¹⁴¹ Bundeskartellamt, 'Bundeskartellamt prohibits Facebook from combining user data from different sources' (2019) <https://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Pressemitteilungen/2019/07_02_2019_Facebook.html> accessed 29 June 2021.

of Justice, with questions centring around the nexus between competition law and data protection law enforcement.¹⁴² Thus, even if hypernudging via digital advertising complied with other relevant legal rules, with anticompetitive effects felt on the market, competition law could be expected to be used as a remedy.

5. Conclusion

This contribution has shown that Google is a systemic actor in the digital advertising ecosystem. Its presence within each layer of the value chain, combined with the control and opaqueness of advertising services, creates dependency and other challenges for business users. Google is also a choice architect that shapes users' experiences on its platform's business domains, including the ads shown to them. Therefore, the company is uniquely positioned to hypernudge users towards specific market outcomes; it has the ability to steer within markets whilst following its economic imperatives.

Positioning digital advertising by Google within a hypernudging framework provides a new lens for studying Google's potential influencing of digital advertising markets and consumers. Hypernudging refers to one of the most sophisticated data-driven nudging practices which allows for dynamically personalised user steering, where (with perfect execution) the right user is reached with the right message, by the right means, at the right time, as many times as needed. When examining local search advertising on Google Maps and integrated advertising campaigns delivered via Google's ad tech, with the company holding sizeable and durable positions in each of these markets respectively, it can be concluded that both could constitute a form of hypernudging. With potential intermediation biases at play, such steering may lead to systemic market manipulation and consumer harm. This makes it clear that the hypernudging manifestations seem to fall within the realm of competition law relevant practices. Competition authorities may examine self-preferencing behaviour as potential exclusionary abuse; similarly, by focusing on direct harm to consumers, they may explore the exploitative abuse route. Nevertheless, to date, there is no conclusive evidence that the company is in fact engaging in such practices.

Finally, as shown by this article, Google's systemic position on the advertiser- and user-sides of the market is the source of hypernudging – effects felt on both are not only inseparable, they are mutually reinforcing. In fact, hypernudging users would not be possible without Google's wide user reach, data advantages and inventory of search and display ads associated with a large advertiser base. While smaller market players

¹⁴² *Facebook Ireland Limited v. Bundesverband der Verbraucherzentralen und Verbraucherverbände* (n 140). See also the recent Commission's investigation into Google's online advertising technology sector, which highlighted "the need to protect user privacy, in accordance with EU laws in this respect, such as the General Data Protection Regulation (GDPR). Competition law and data protection laws much work hand in hand". Commission (n 110).

may be able to facilitate some forms of nudging, unlike Google, they may not be able to deliver all, or even most, of the following: the right message, to the right user, by the right means, at the right time, as many times as needed. Missing the mark for any of these elements is expected to limit the dynamism and potency of these processes, also leading to fewer potentially negative effects on the market and individual users. Therefore, only once we zoom out and consider both sides of the market, the full picture of the sources and impact of hypernudging emerges. This may require stepping outside the realms of traditional competition law assessment and embracing the more holistic approach towards the understanding of respective markets and the processes that occur within.



Chapter 5

The Future of Anticompetitive Self-preferencing: Analysis of Hypernudging by Voice Assistants under Article 102 TFEU

Viktorija Morozovaite, 'The future of anticompetitive self-preferencing: analysis of hypernudging by voice assistants under Article 102 TFEU' (2023) European Competition Journal. DOI: <https://doi.org/10.1080/17441056.2023.2200623>.

With the nascent rise of the voice intelligence industry, consumer engagement with digital products and services is slowly evolving. The expected shift from navigating digital environments by a “click” of a mouse or a “touch” of a screen to “voice commands” has set digital platforms for a race to become leaders in voice-based services. The Commission’s inquiry into the consumer IoT sector revealed that the development of the market for general-purpose voice assistants is spearheaded by a handful of big technology companies, highlighting the concerns over the contestability and growing concentration in these markets. This contribution posits that voice assistants by leading providers are uniquely positioned to engage in dynamically personalised steering – *hypernudging* – of consumers towards market outcomes. It examines hypernudging by voice assistants through the lens of abuse of dominance prohibition enshrined in article 102 TFEU, showcasing that advanced user influencing, such as hypernudging, could become a vehicle for engaging in a more subtle anticompetitive self-preferencing. Deviating from existing European competition law literature, which examines personalised business strategies vis-à-vis exploitative abuses, this article establishes that hypernudging may lead to exclusionary effects on the market.

1. Introduction

Voice assistants (VAs) are becoming a ubiquitous feature of modern life. Integrated into smart home devices, wearables, vehicles, computers, and smartphones, they offer support for mundane everyday tasks while continuously and silently analysing their owners' characteristics, habits and emotions. The consumer Internet of Things (IoT) sector has recently come under closer regulatory scrutiny in Europe. The European Commission's (the Commission) inquiry into the sector highlighted several concerns related to the development and competitiveness of consumer IoT and the market for general purpose VAs, specifically: restrictions on multi-homing, concerns about default settings and pre-installations on VAs, data accumulation and lack of interoperability.¹ It also showcased that the development of the voice intelligence industry is spearheaded by big technology companies such as Amazon (Alexa), Google (Home Assistant), and Apple (Siri).²

This contribution posits that VAs by leading providers are uniquely positioned to engage in dynamically personalised steering – *hypernudging* – of users towards specific market and non-market outcomes and thus seamlessly influence and shape their preferences.³ Importantly, hypernudging should not be viewed as a single behaviourally informed intervention or design element deployed to steer the user. Instead, it represents multiple interventions and elements delivered within the context of complex systems that may not be indicative of harmful effects on their own.⁴ The scope of this article is limited to examining hypernudging by VAs in an economic activity context, namely, VAs providing information (and recommendations) about consumers' purchasing decisions and helping them execute pre-determined commercial tasks, such as renewing household items orders. Positioning recommendations by VAs within the hypernudging framework provides a new lens for studying their potential influence on consumers' personal spaces and aggregate effects on the market. When

¹ Commission, 'Statement by Executive Vice-President Margrethe Vestager on the initial findings of the Consumer Internet of Things Sector Inquiry' (9 June 2021) <https://ec.europa.eu/commission/presscorner/detail/de/speech_21_2926> accessed 24 October 2022; The UK parliament has followed the suit, see: Digital, Culture, Media and Sport Committee, 'Connected Tech: Smart or Sinister?' <<https://committees.parliament.uk/work/6686/connected-tech-smart-or-sinister/>> accessed 24 October 2022.

² Commission, 'Final report - Sector Inquiry into consumer Internet of Things' (Report COM (2022) 19 final.

³ Karen Yeung, 'Hypernudge': Big Data as a mode of regulation by design' (2017) 20(1) *Information, Communication & Society* 118; Viktorija Morozovaite, 'Hypernudging in the changing European regulatory landscape for digital markets' (2022) 15(1) *Policy & Internet* 78. See also on a related concept of "cumulative dark patterns": OECD, 'Dark commercial patterns' (2022) OECD Digital Economy Papers No 336 <<https://doi.org/10.1787/44f5e846-en>> accessed 14 December 2022.

⁴ Ioannis Lianos, 'Competition law in the digital era: a complex systems perspective' (2019) <<https://ssrn.com/abstract=3492730>> accessed 14 December 2022; Lisanne Hummel, 'Complexity and innovation: Market power of big tech companies in European competition law' (The Academic Society for Competition Law (ASCOLA) 17th Annual Conference, Porto, 1 July 2022).

hypernudging is used to protect and/or expand firms' market power to the detriment of consumers, it is a cause for closer regulatory scrutiny.

In the EU, competition law rules are applied to curb the negative manifestations of market power to safeguard inter alia consumer welfare and the system of undistorted competition.⁵ Article 102 TFEU provision deals with sanctioning dominant undertakings that abuse their market power in a specific relevant market. The Treaty does not contain an exhaustive list of abuses or an explicit definition of abuse. Instead, the concept of abuse develops through the case law of the European Courts.⁶

This contribution examines hypernudging by VAs vis-à-vis the self-preferencing form of abuse, which has recently been clarified in the Google Shopping judgement of the General Court (the Court).⁷ It deviates from existing competition law literature which examines personalised business practices through exploitative abuse lens by showcasing that hypernudging could also lead to exclusionary effects on the market.⁸ Exclusionary effects reference a dominant firm engaging in a conduct which artificially raises barriers to entry and expansion, limiting consumer choice and quality, and ultimately raising prices for end consumers.

Against the backdrop of the Digital Markets Act (the DMA), which contains prohibitions against self-preferencing behaviour by VAs designated as gatekeepers, this article provides a justification for not overlooking European competition law as a relevant instrument in sanctioning anticompetitive next-generation consumer influencing practices such as hypernudging. Ultimately, it is set to answer the main research question: under which circumstances can hypernudging by VAs be considered a vehicle for platforms to engage in self-preferencing behaviour, and could such self-preferencing fall under the scope of article 102 TFEU?

It is important to note from the onset, this article does not posit that hypernudging processes should be labelled as a specific form of abuse, or an inherently problematic form of self-preferencing. Instead, it is assessed as potential means for anticompetitive self-preferencing to take place. After all, European competition law does not offer a one-size-fits-all solution to various forms of hypernudging and may trigger

⁵ Commission, 'Guidance on the Commission's Enforcement Priorities in Applying Article 82 of the EC Treaty to Abusive Exclusionary Conduct by Dominant Undertakings' (Communication) OJ C 45/7.

⁶ Liza Loudahl Gormsen, *A principled approach to abuse of dominance in European competition law* (Cambridge University Press 2010) 10.

⁷ Case T-612/17 *Google and Alphabet v Commission (Google Shopping)* [2021] ECLI:EU: T:2021:763.

⁸ For instance, on exploitative abuse angle see: Marco Botta and Klaus Wiedemann, 'To discriminate or not to discriminate? Personalised pricing in online markets as exploitative abuse or dominance' (2020) 50 *European Journal for Law and Economics* 381; Inge Graef, 'Consumer sovereignty and competition law: From personalization to diversity' (2021) 58(2) *Common Market Law Review* 471.

considerations under different theories of harm or fall within the scope of legitimate business strategies.

The article proceeds as follows. The first section will set out the state-of-the-art of the market for VAs while contextualising its development concerning the features of dynamic digital markets. After establishing that leading VAs' providers possess market power, it will describe European competition law developments in digital markets to highlight the momentum created for sector-specific regulation. The second section will demonstrate why VAs are so well-positioned to hypernudge consumers and, in turn, shape their preferences and behaviour and the circumstances in which such conduct may threaten the functioning of competitive markets. Finally, the third section will closely examine hypernudging by VAs vis-à-vis European competition law's theory of harm of anticompetitive self-preferencing. It will do so by deconstructing its elements and development through case law, concluding with asserting European competition law's relevance in addressing potential market threats of hypernudging.

2. The Rise of Market Power in the Voice Intelligence Industry

The voice intelligence industry is at its nascent stages.⁹ The development of the market for general-purpose VAs is led by a handful of big technology companies that shape consumers' experiences and interactions online.¹⁰ The recent Commission's inquiry into the consumer IoT sector highlighted several concerns over the concentration of market power and, in turn, potential threats to a competitive process. This section will provide a comprehensive overview of the market for general-purpose VAs. In light of the presence of substantial market power, it will examine European competition law and the DMA as appropriate legal regimes to address its potential negative manifestations, ultimately justifying this article's focus on article 102 TFEU perspective.

2.1. The Market for General Purpose Voice Assistants

VAs are "voice-activated pieces of software that can perform various tasks, acting both as a platform for voice applications and a user interface".¹¹ They represent a sub-set of virtual assistants that use voice as input.¹² This contribution focuses on general-purpose VAs that enable access to a broad range of functionalities in response to users' voice

⁹ Joseph Turow, *The Voice Catchers: How Marketers Listen in to Exploit your Feelings, your Privacy and your Wallet* (Yale University Press 2021).

¹⁰ Sector Inquiry into consumer Internet of Things (n 2), para 10.

¹¹ *Ibid*, para 25.

¹² Slang Labs, 'Voice Assistants: Transforming our Lives One Voice Interaction at a Time.' <<https://www.slanglabs.in/voice-assistants#:~:text=Voice%20Assistants%20are%20a%20subset%20of%20Virtual%20Assistants,These%20types%20of%20assistants%20are%20called%20Voice%20Assistants>> accessed 24 October 2022.

commands, such as providing recommendations, controlling smart home devices, and executing daily tasks.¹³ While primarily associated with smart home speakers, VAs are integrated into an increasing number of smart applications and devices, including smart home appliances, wearables, connected vehicles, and smartphone applications.¹⁴

The market for general-purpose VAs has an oligopolistic competition structure, with a handful of big technology companies competing for the market.¹⁵ The Commission's inquiry into the consumer IoT sector showed that in Europe, Amazon (Alexa), Google (Home Assistant), and Apple (Siri) are leading players in the development of the voice intelligence industry.¹⁶ Fierce competition among leading providers is well-illustrated by the smart speakers' market developments. In 2018, Google and Amazon were engaging in price wars to plant their respective products at consumers' houses.¹⁷ Companies recognise that the stakes for entrenching themselves as consumers' go-to IoT brands extend beyond VAs' market: winning platforms are likely to control a significant user interface (UI), with VAs becoming a likely gateway of consumer e-commerce and, ambitiously, world wide web experiences.¹⁸

The movement towards voice-based services could be understood in the context of UI shifts comparable to the web and smartphones.¹⁹ Each of these shifts has changed the way people interact with and access digital content: the web gave us a "click" enabled by the computer mouse, smartphones introduced "touch" and "swipe," while voice further simplifies users' interactions by allowing them to "speak".²⁰ The development of commerce is, too, mirrored in these UI shifts. Just as e-commerce and mobile commerce became ubiquitous with the adoption of web and mobile applications, respectively, voice commerce is expected to follow this trend, despite the slow uptake.²¹ According to the Commission's findings, the projected use of VAs worldwide will

¹³ Commission, 'Preliminary Report - Sector Inquiry into Consumer Internet of Things' (Staff Working Document) SWD (2021) 144 final, para 27.

¹⁴ Ibid; Atieh Poushneh, 'Humanizing voice assistant: The impact of voice assistant personality on consumers' attitudes and behaviors' (2021) 5 *Journal of Retailing and Consumer Services* 1, 1.

¹⁵ Victoriia Noskova, 'Voice assistants as gatekeepers for consumption? - how information intermediaries shape competition' (2022) *European Competition Journal* 1, 5.

¹⁶ Sector Inquiry into Consumer Internet of Things (n 2), para 10.

¹⁷ Nick Routley, 'Amazon vs. Google: The Battle for Smart Speaker Market Share' (*Visual Capitalist*, 4 January 2018).

¹⁸ 'Amazon is offering an Echo Dot for 99 cents with an Amazon Music Unlimited subscription' (24 October 2019) <<https://www.theverge.com/2019/10/24/20930398/amazon-echo-dot-99-cents-amazon-music-unlimited-subscription-deal-promotion>> accessed 7 April 2022.

¹⁹ Brett Kinsela, 'Why tech giants are so desperate to provide your voice assistant' <<https://hbr.org/2019/05/why-tech-giants-are-so-desperate-to-provide-your-voice-assistant>> accessed 7 April 2022; see also: Win Shih, 'Voice revolution' (2020) 56(4) *Library Technology Reports* 5.

²⁰ Ibid.

²¹ Sean Colvin and Will Kingston, 'Why conversation is the future of customer experience' (*PwC Digital Pulse Report*, July 2017); Janarthanan Balakrishnan and Yogesh K Dwivedi, 'Conversational commerce: Entering the next stage of AI-powered digital assistants'(2021) *Annals of Operations Research* 1.

double between 2020-2024, from 4.2 billion to 8.4 billion, with 11% of EU citizens surveyed in 2020 already using VAs.²² Voice and text-assisted AI are increasingly utilised in customer services, product information, marketing, and sales support.²³ The covid-19 pandemic further accelerated virtually-assisted, staff-free shopping experiences.²⁴ However, the adoption of VAs in consumers' customer journeys is yet to mature, with consumers currently focusing on purchasing small and quick items that do not require visualisation.²⁵

The success of the leading VAs is reinforced by the dynamics of the respective platform ecosystems they operate in – the utility of the service to the users is shaped and determined by those ecosystems.²⁶ Platform ecosystems consist of two key elements – a platform and its complementary applications.²⁷ Here, a software-based product for voice assistants serves as a foundation on which outside parties, such as smart home device producers or software developers, can build complementary goods and services around.²⁸ For example, Amazon's Alexa is part of Amazon's ecosystem of digital products and services. As a result, the user may directly access, among others, shopping (Marketplace, Wholefoods), entertainment (Prime Video, Amazon Music, Twitch), news (Washington Post), and IoT devices (Echo, Ring) services.²⁹ By the same token, it is compatible with an increasing number of third-party hardware with a “works with

²² Commission, ‘Questions & Answers. Antitrust: Commission publishes preliminary report on consumer Internet of Things sector inquiry’ (9 June 2021) <https://ec.europa.eu/commission/presscorner/detail/es/qanda_21_2908> accessed 14 December 2022.

²³ Huan Chen and others, ‘Consumers’ perception on artificial intelligence applications in marketing communication’ (2021) 25(1) *Qualitative Market Research: An International Journal* 125, 127.

²⁴ Deloitte, ‘2022 Retail Industry Outlook. The pandemic creates opportunities for the great retail reset’ (2022) 11 <<https://www2.deloitte.com/content/dam/Deloitte/us/Documents/consumer-business/2022-retail-industry-outlook.pdf>> accessed 24 October 2022; KPMG, ‘Customer Experience in the New Reality’ (October 2020) 33 <<https://assets.kpmg/content/dam/kpmg/br/pdf/2021/03/Customer-experience-new-reality.pdf>> accessed 24 October 2022.

²⁵ Karien Oude Wolbers and Nadine Walter, ‘Silence Is Silver, but Speech Is Golden: Intelligent Voice Assistants (IVAs) and Their Impact on a Brand's Customer Decision Journey with a Special Focus on Trust and Convenience—A Qualitative Consumer Analysis in the Netherlands’ (2021) 18(1) *IUP Journal of Brand Management* 7, 9.

²⁶ Amrit Tiwana, *Platform Ecosystems: Aligning Architecture, Governance and Strategy* (Morgan Kaufmann 2014) 5.

²⁷ Ibid.

²⁸ Ibid, 7. See also: Carliss Y Baldwin and Jason C Woodard, ‘The architecture of platforms: a unified view’ (2009) 32 *Platforms, markets, and innovation* 19; Annabelle Gawer, ‘Bridging differing perspectives on technological platforms: toward an integrative framework’ (2014) *Research Policy* 43. In the law and economics literature, ecosystems can be viewed as “multi-actor groups of collaborating complementors (i.e., “theory of the firm” alternatives to vertical integration or supply-chain arrangements) and multiproduct bundles offered to customers (i.e., horizontally or diagonally connected goods and services that are “packaged” together), focused on customer ease—and lock-in.” See: Michael G Jacobides and Ioannis Lianos, ‘Ecosystems and competition law in theory and practice’ (2021) 30(5) *Industrial and Corporate Change* 1199.

²⁹ Jon Nordmark, ‘Amazon's Ecosystem Map’ (*Medium*, 17 June 2020) <<https://medium.com/@jonnordmark/amazons-ecosystem-map-d25abcac9613>> accessed 24 October 2022.

Amazon Alexa” label, including brands such as Sonos, Marshall, Bose, and Libraton Zipp 2.³⁰ In addition, “Alexa Skills Kit” is a software development framework that allows developers to create skills – voice activated applications – for Amazon’s VA.³¹

The way these platform ecosystems connect and integrate with third-party consumer IoT products and services depend on their design. For instance, when setting up their smart home environments that can be controlled with the help of VAs, consumers have to choose how they will bring the different devices together; a logical starting point is choosing a VA. A distinction can be made between voice assistants operating as part of a more open ecosystem, such as the described Amazon’s Alexa or Google Assistant, and more closed ecosystems, such as Apple’s HomeKit controlled by Siri.³² Whichever ecosystem they choose, consumers are likely to be locked in to build their environments based on compatibility with that ecosystem. Even in cases of multi-homing, specific areas of a consumer’s life, such as a smart home or commuting, can be compartmentalised in a way that requires building those environments considering the compatibility of devices.

The Commission’s inquiry into the consumer IoT sector highlighted several concerns stemming from the market power dynamics within the general-purpose VAs market. One such concern relates to the lack of standardisation in the industry, which exacerbates the dependencies upon the leading VAs providers and further reinforces consumer lock-in effects while stifling potential competition.³³ Currently, third-party consumer IoT services providers seem to cater to their service offerings and future business strategies, focusing on leading providers’ standards.³⁴ Furthermore, the identified competition features in the general-purpose VAs market corroborate that these leading companies are expanding and shielding their market power by strategically using their application interfaces, algorithms, and contractual restrictions to ensure interconnectivity and interoperability for final consumers.³⁵ The market is characterised by high barriers to entry and expansion, with most data being collected

³⁰ Revised: David Nield, ‘The best smart home systems 2023: Top ecosystems explained. Google Home, Alexa, Homekit, SmartThings and more compared’ (*Ambient*, 30 June 2023) <<https://www.the-ambient.com/guides/smart-home-ecosystems-152>> accessed 8 August 2023.

³¹ Alexa, ‘What is the Alexa Skills Kit’ <<https://developer.amazon.com/en-US/docs/alexa/ask-overviews/what-is-the-alexa-skills-kit.html>> accessed 14 December 2022.

³² Ibid.

³³ Preliminary Report - Sector Inquiry into Consumer Internet of Things (n 13), paras 231-233. See also a recent lawsuit against Google alleging that the company is stifling competition in voice recognition market: CPI, ‘New Suit Accuses Google of Stifling Voice Recognition Competitors’ (6 April 2022) <<https://www.competitionpolicyinternational.com/new-suit-accuses-google-of-stifling-voice-recognition-competitors/>> accessed 24 October 2022.

³⁴ Preliminary Report - Sector Inquiry into Consumer Internet of Things (n 13), 53.

³⁵ Ibid; Jacobides and Lianos (n 28), 1203.

and held by leading companies, pointing to the need to oversee the developments driven by firms with substantial market power.³⁶

2.2. Addressing Market Power in Digital Markets: from Article 102 TFEU to Sector-Specific Regulation

The observed market dynamics in the consumer IoT sector led European policymakers to bring forward regulatory initiatives aimed to address some areas of concern, with focus being placed on removing barriers to entry and expansion.³⁷ This article posits that in addition to the emergent regulation, competition law provides a logical legal avenue in curbing the negative manifestations of market power in the context of general-purpose VAs. Hypernudging by VAs could be assessed as a way to engage in exclusionary self-preferencing behaviour sanctioned under Article 102 TFEU. By following the relevant developments in the competition law enforcement in digital sector, this section sets out the background necessary for further competition law analysis (see section 4).

2.3.1. Abuse of Dominance

Abuse of dominance prohibition is drafted in a broad and abstract manner, leaving its interpretation and defining of specific concepts up to enforcement and judicial bodies. When building an abuse of dominance case, the first step necessitates establishing that an undertaking in question does hold a dominant position. To do so, it is necessary to define the relevant market, to delineate “the boundaries of competition between firms”.³⁸ Defining the relevant market entails considering its product and geographic dimensions, which are determined by assessing demand substitution, supply substitution, and potential competition using economic tests. In practice, both the Commission and the Courts tend to define the relevant market in narrow terms. Once the relevant market is established, the competitive constraints and undertaking’s position in that market are examined. The assessment necessitates considering the undertaking’s market shares

³⁶ Preliminary Report - Sector Inquiry into Consumer Internet of Things (n 13), chapter 4.

³⁷ For instance, Regulation (EU) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector and amending Directives (EU) 2019/1937 and (EU) 2020/1828 (Digital Markets Act) [2022] OJ L 265/1. See also the proposal for the European Data Act aimed to harmonize rules for data access and sharing, specifically covering the IoT sector: Commission, ‘Proposal for a Regulation of the European Parliament and of the Council on Harmonized Rules on Fair Access to and Use of Data (Data Act)’ COM (2022) 68 final.

³⁸ ‘Commission Notice on the definition of relevant market for purposes of Community competition law’ [1997] OJ C 372/5, para 2.

and other economic factors, such as performance indicators, price levels, profits, and barriers to entry and expansion.³⁹

Determining that an undertaking holds a dominant position is insufficient to trigger Article 102 TFEU intervention. Firms that gain strong market positions due to rigorous competition and innovation should not be penalised for their success. It is only when undertakings abuse their dominant position by engaging in behaviour that deviates from competition on merits that they ought to be sanctioned.⁴⁰ The Treaty does not contain an exhaustive list of abuses.⁴¹ However, the literature and case law identify three broad categories: exclusionary abuses that exclude competitors from the relevant market, exploitative abuses that are harmful to consumers directly, and discriminatory abuses that apply dissimilar conditions to equivalent transactions between various customers. The subject of this article is self-preferencing (see section 4.2), which the Court construed as an independent type of exclusionary abuse.

Finding article 102 TFEU infringement necessitates establishing a logically consistent theory of harm, which must articulate how the dominant undertaking's behaviour harms competition and consumers. It is done relative to a counterfactual scenario, not deviating from the various parties' available empirical evidence or incentives.⁴² The standard for establishing anticompetitive effects that leads to an infringement of Article 102 TFEU is, nevertheless, disputed. A distinction could be made between "capability and likelihood of anticompetitive effects taking place".⁴³ The former relates to a situation where a credible mechanism through which anticompetitive effects would manifest is identified.⁴⁴ The latter refers to conduct more likely than not to

³⁹ Case 85/76 *Hoffmann-LaRoche v Commission* [1979] ECLI:EU:C:1979:36, paras 39-41: "The existence of a dominant position may derive from several factors which taken separately are not necessarily determinative but among these factors a highly important one is the existence of very high market shares"; Case 62/86 *AKZO v Commission* [1991] ECLI:EU:C:1991:286, para 60: over 50% market share leads to presumption of dominance; Case T-30/89 *Hilti v Commission* [1991] ECLI:EU:T:1991:70, para 92: over 70% market share provides a clear indication of dominance; Guidance on the Commission's enforcement priorities (n 5), para 16-18.

⁴⁰ Case 322/81 *Nederlandsche Banden Industrie Michelin (Michelin I) v Commission* [1983] ECLI:EU:C:1983:313, para 57; Case T-83/91 *Tetra Pak v Commission (Tetra Pak II)* [1993] ECR II-755, para 114; Case T-228/97 *Irish Sugar v Commission* [1999] ECLI:EU:T:1999:246, para 112.

⁴¹ Loudahl Gormsen (n 6), 10.

⁴² Hans Zenger and Mike Walker, 'Theories of harm in European competition law: A progress report' in Jacques Bourgeois and Denis Waelbroeck (eds) *Ten Years of Effects-based Approach in EU Competition Law* (Bruylant 2012).

⁴³ Pablo Ibáñez Colomo and Alfonso Lamadrid, 'On the Notion of Restriction of Competition: What We Know and What We Don't Know We Know' (2016) 34. Forthcoming in Damien Gerard, Massimo Merola and Bernd Meyring (eds), *The Notion of Restriction of Competition: Revisiting the Foundations of Antitrust Enforcement in Europe* (Bruylant 2017) <<https://ssrn.com/abstract=2849831>> accessed 24 October 2022.

⁴⁴ Pablo Ibáñez Colomo, 'Anticompetitive effects in EU competition law' (2021) 17(2) *Journal of Competition Law and Economics* 309.

lead to an anticompetitive outcome – a higher threshold for enforcement authorities to meet.⁴⁵ There is generally no requirement to show that conduct has actual effects on competition.⁴⁶ Instead, there must be a probability of anticompetitive effects taking place, albeit those effects cannot be purely hypothetical.⁴⁷ The Court also stressed that the Commission is required to analyse all the relevant circumstances in the case.⁴⁸ Absent objective justification for dominant undertaking's behaviour, establishing a credible theory of harm would lead to article 102 TFEU infringement.

2.2.2. Competition in the Digital Economy

It is a truism that the rise of the digital economy introduced challenges in applying competition law tools in abuse of dominance cases, which have been amply criticised for not being able to fully capture the power dynamics that play out in digital markets.⁴⁹ The fluidity of the boundaries of market power and, in turn, dominance, are highlighted in the context of big technology companies that form intricate multi-product and multi-actor ecosystems. These firms possess substantive market power in their respective core platform service markets, characterised by high market shares, network effects, data gathering and analysis capabilities, economies of scale and scope.⁵⁰ This market power is further reinforced by the interrelationships between market actors, with big technology companies creating organisational dependencies among their network

⁴⁵ Ibid; Renato Nazzini, 'Standard of Foreclosure under Article 102 TFEU and the Digital Economy Debate' [2020], King's College London Law School Research Paper Forthcoming, <<https://ssrn.com/abstract=3650837> or <http://dx.doi.org/10.2139/ssrn.3650837>> accessed 24 October 2022.

⁴⁶ T-203/01 *Michelin v Commission* (Michelin II) [2003] ECLI:EU:T:2003:250, para 239.

⁴⁷ C-209/10 *Post Danmark A/S v Konkurrencerådet* [2012] ECLI:EU:C:2012:172, para 65. In the past, the European Commission and the Courts were criticized for adopting a form-based approach in their assessment, which refers to a prima facie prohibition of a practice regardless of its effects.

⁴⁸ C-52/09 *Konkurrensverket v TeliaSonera Sverige AB* [2011] ECLI:EU:C:2011:83, para 28; T-286/09 *RENV Intel Corporation Inc. V European Commission* [2022] ECLI:EU:T:2022:19.

⁴⁹ Among others, see: Jacques Crémer, Yves-Alexandre de Montjoye and Heike Schweitzer, *Competition policy for the digital era. Final Report* (Publications Office, 2019) <<https://data.europa.eu/doi/10.2763/407537>> accessed 24 October 2022; Australian Competition and Consumer Commission (ACCC), 'Digital platforms inquiry: Final report' (Australian Competition and Consumer Commission, 26 July 2019) <<https://www.accc.gov.au/about-us/publications/digital-platforms-inquiry-final-report>> accessed 10 August 2023; 'Stigler Committee on Digital Platforms: Final Report' (16 September 2019) <<https://www.chicagobooth.edu/-/media/research/stigler-center/pdfs/digital-platforms---committee-report---stigler-center.pdf>> accessed 24 October 2022. In this context, it is also important to mention the ensuing debate about the suitability of competition law tools and even the very nature of antitrust. This seems to be a tipping point, an opportunity for this legal field to be re-invented and adjusted to fit the new realities of the digital markets.

⁵⁰ For example, in the market for general search services Google holds a super-dominant position, see on the concept: Alessia S D'Amico and Baskaran Balasingham, 'Super-dominant and super-problematic? The degree of dominance in the Google Shopping judgement' (2022) *European Competition Journal* 1.

of partners.⁵¹ Although the characteristics of big technology companies are not fundamentally new, their power seems to have greater *pervasiveness, scope, precision, and invasiveness* in modern societies and individual lives, with effects spilling beyond the market into the social, political, and personal domains.⁵²

Over the past decade, defining dominance in digital markets has been a subject of intense debate.⁵³ Questions have arisen concerning the multi-sided nature of digital platforms and their structural roles within inter-connected platform ecosystems, characterised by vertical integration, cross-sectorization, and private modes of governance.⁵⁴ To adequately address emerging challenges, more understanding is required regarding how the different business areas of these complex systems interact.⁵⁵

In digital abuse of dominance cases, the Commission and the Courts have continuously resorted to defining markets narrowly.⁵⁶ Illustrative is *Google Android* decision, which dealt with multi-product tying abuse and was largely confirmed by the Court.⁵⁷ In *Google Android*, the Commission concluded that non-licensable operating systems

⁵¹ Anne Helmond, David B Nieborg and Fernando van der Vlist, 'Facebook's evolution: development of a platform as infrastructure' (2019) 3(2) *Internet Histories* 123; Jean-Christophe Plantin and others, 'Infrastructure studies meet platform studies in the age of Google and Facebook' (2018) 20(1) *New media & society* 293.

⁵² Anna Gerbrandy and Pauline Phoa, 'The power of big tech corporations as Modern Bigness' in Rutger Claassen, Michael Bennett and Huub Brouwer (eds) *Wealth and Power: Philosophical Perspectives* (Routledge 2022); José van Dijck, Thomas Poell, and Martijn de Waal, *The platform society: Public values in a connective world* (Oxford University Press 2018); Orla Lynskey, 'Regulating Platform Power' (2017) LSE Legal Studies Working Paper No. 1/2017; Lina M Khan, 'Sources of tech platform power' (2017) 2 *Georgetown Law Technology Review* 325; Emily B Laidlaw, 'A framework for identifying Internet information gatekeepers' (2010) 24(3) *International Review of Law, Computers & Technology* 263.

⁵³ Some even questioned the very need for defining relevant market in the first place. See: Louis Kaplow, 'Why (ever) define markets?' (2010) *Harvard Law Review* 437; Crémer, de Montjoye and Schweitzer (n 49); Investigation of Competition in Digital Markets, Majority Staff Report and Recommendations, Subcommittee on Antitrust, Commercial and Administrative Law (2020) <https://judiciary.house.gov/uploadedfiles/competition_in_digital_markets.pdf?utm_campaign=4493-519> accessed 24 October 2022; Viktoria HSE Robertson and Magali Eben, 'The Relevant Market Concept in Competition Law and Its Application to Digital Markets: A Comparative Analysis of the EU, US, and Brazil' (2021) Graz Law Working Paper No 01-2021; Jacobides and Lianos (n 28), 1204-1206.

⁵⁴ José van Dijck, 'Seeing the forest for the trees: visualizing platformisation and its governance' (2021) 23(9) *New media & society* 2801; Daniel Mandrescu, 'Applying (EU) competition law to online platforms: reflections on definition of the relevant market' (2018) 41(3) *World Competition: Law and Economics Review* 1.

⁵⁵ Hummel (n 4); Lianos (n 4).

⁵⁶ Christine Wilson and Keith Klovers, 'Same rule, different result: how the narrowing of product markets altered substantive antitrust rules' (2021) <<https://ssrn.com/abstract=3797089>> accessed 24 October 2022.

⁵⁷ *Google Android* (Case AT.40099) Commission Decision C(2018) 4761 final [2019] OJ C402/19; the General Court has upheld most of the Commission's decision with the exception of the Commission's handling of aspects of administrative procedure, which resulted in reduction of fine. See: Case T-604/18 *Google and Alphabet v Commission (Google Android)* [2022] ECLI:EU:T:2022:541.

(OS) do not belong to the same market as licensable ones. Consequently, Google's dominant position in licensable OSs was considered not to be meaningfully affected by the competitive constraint exerted by Apple or BlackBerry.⁵⁸ In reaching the decision, the Commission relied on non-conventional market indicators including small but significant non-transitory decrease in quality (SSNDQ) test to examine the reaction of users and app developers to a hypothetical deterioration in quality of Android, as well as assessed user loyalty and switching costs, highlighting the limitations of traditional market definition toolkit in the digital sphere.⁵⁹ By the same token, Android app stores were considered to form a separate relevant market from Apple's App Store, showcasing that OSs and app stores were assessed as part of the same system.⁶⁰ Further demonstrating the salience of the topic, in March 2020, the Commission launched the evaluation of the Market Definition Notice and gathered evidence from stakeholders, with findings indicating the need for updating the Notice to reflect the realities of digital markets.⁶¹

Similar hurdles are expected to emerge in defining dominance in the general-purpose VAs' market which, as said before, is currently dominated by three players: Amazon Alexa, Google Home Assistant and Apple Siri. It is noteworthy that establishing each company's respective market share is challenging given that VAs are integrated and pre-installed in a number of free services and devices, which lack reliable statistics.⁶² Since this contribution is focused on the analysis of anticompetitive self-preferencing, it will operate under an assumption that dominance would be established either because the market tipped to favour a single firm or general-purpose VAs evolved in a way

⁵⁸ *Google and Alphabet v Commission (Google Android)* (n 57), para 139.

⁵⁹ Carter Chim, 'A search beyond challenge? Takeaways from the European General Court's ruling in the *Google Android* antitrust appeal' (*Denis Chang's Chambers*, 13 October 2022) <<https://dcc.law/competition-law-antitrust-google-android-european-general-court-appeal/>> accessed 14 December 2022; Pablo Ibáñez Colomo, 'Comments on Android (I): some questions for economists on market definition' (*Chillin' Competition*, 3 October 2019) <<https://chillingcompetition.com/2019/10/03/comments-on-android-i-some-questions-for-economists-on-market-definition/>> accessed 14 December 2022; Daniel Mandrescu, 'Lessons and questions from Google Android – Part 1 – the market definition' (*lexxion*, 29 October 2019) <<https://www.lexxion.eu/en/coreblogpost/lessons-and-questions-from-google-android-part-1-the-market-definition/>> accessed 14 December 2022; Dimitrios Katsifis, 'Some additional thoughts on the General Court's Judgement in *Google Android*' (*The Platform Law Blog*, 5 December 2022) <<https://theplatformlaw.blog/2022/12/05/some-additional-thoughts-on-the-general-courts-judgment-in-google-android/>> accessed 14 December 2022.

⁶⁰ *Google and Alphabet v Commission (Google Android)* (n 57), para 250.

⁶¹ Commission, 'Executive Summary of the Evaluation of the Commission Notice on the Definition of Relevant Market for the Purposes of Community Competition Law of 9 December 1997' SWD (2021) 200 final.

⁶² Noskova, (n 15), 6.

that allows for sufficient differentiation to constitute separate relevant markets.⁶³ The “system perspective” identified in *Google Android* decision may be informative in this regard since VAs’ development is generally closely dependent on the platform ecosystem it belongs to.⁶⁴

Before examining what hypernudging by VAs entails and whether it could fall within the scope of article 102 TFEU, specifically regarding self-preferencing, it is necessary to acknowledge that digitalisation of markets has also led to a surge of abuse of dominance investigations that tested the boundaries of existing theories of harm. Big technology companies have been at the centre of enforcers’ radar. While building abuse of dominance cases proved to be a lengthy endeavour, the growing knowledge and enforcement experiences showed that the digital market dynamics and structure is prone to systemic concerns, instead of one-off competition law infringements. Therefore, the momentum has been created for sector-specific regulation, with the DMA adopted in July 2022.⁶⁵

2.2.3. The Digital Markets Act

The DMA is a regulation that aims to foster fairness and contestability in the digital sector.⁶⁶ It identifies black-listed and grey-listed practices for companies designated as gatekeepers – large online platforms with entrenched and durable positions that significantly impact the internal market and provide core platform services on which other business users and end users depend.⁶⁷ The final DMA text includes VAs within the definition of “core platform services”.⁶⁸ Consequently, problematic self-preferencing practices that manifest through VAs technology may be, to a large extent, addressed by this regulation. Article 6(5) outlines an obligation to:

⁶³ It is noteworthy that even though market shares in the relevant market provide the preliminary indication of dominance, with a market share below 40% indicating little likelihood of dominance, they will be interpreted in the light of the specific relevant market conditions. See: Guidance on the Commission's enforcement priorities (n 5), para 14. In addition, a possible route may be provided by differentiating the market based on VAs’ function, ranging from smart home devices to transportation and e-commerce.

⁶⁴ For example, in June 2022 Google announced shutting down its Assistant’s Conversational Actions in favor of App Actions for Android. “The new approach is to just have developers add voice control capabilities to their existing Android apps instead of creating an entirely independent experience from the ground up that was device agnostic”, see: Abner Li, ‘Google removing third-party Assistant voice apps and Nest Hub games amid Android focus’ (*9to5Google*, 13 June 2022) <<https://9to5google.com/2022/06/13/google-assistant-voice-apps/>> accessed 14 December 2022.

⁶⁵ Digital Markets Act (n 37).

⁶⁶ *Ibid*, article 1(1).

⁶⁷ *Ibid*, article 3.

⁶⁸ The text includes “virtual assistants”, a broader term that also covers VAs. *Ibid*, articles 2(2)(h) and 2(12).

“not treat more favourably in ranking and related indexing and crawling, services and products offered by the gatekeeper itself than similar services or products of a third party. The gatekeeper shall apply transparent, fair and non-discriminatory conditions to such ranking”.

The outlined obligation in effect amounts to a *per se* prohibition on self-preferencing.⁶⁹ While this contribution is not aimed to address the lively debate on the interaction between competition law and the DMA,⁷⁰ it is necessary to justify the choice for assessing dynamically personalised consumer steering – hypernudging – by VAs as a potential article 102 TFEU infringement.

In light of the emerging voice intelligence industry, including VAs under the scope of the DMA is a forward-looking choice. However, the application and impact of promising provisions are expected to be heavily litigated.⁷¹ As will be discussed (see section 4), hypernudging by VAs is an elevation of existing forms of self-preferencing behaviour already familiar to regulators and enforcement authorities. In the context of intricately connected multi-product and multi-actor ecosystems, one could envision the next-generation of self-preferencing to manifest in more covert ways. Hypernudging has the potential to elevate the practice of self-preferencing, where instead of steering consumers’ behaviour by ranking recommendations for a specific product uniformly and overtly across the different consumer groups, it moves towards presenting multiple offers, at different times, perhaps through various channels within the respective platform ecosystem the VA belongs to.⁷² In such a scenario, individual recommendations and actions may not be indicative of harmful behaviour.⁷³

Even though the drafting of article 6(5) is wide enough to capture such next-generation self-preferencing behaviour, in practice, the challenge would emerge in pinpointing the specific features that lead to it. With the lack of observability of complex proprietary systems that are expected to facilitate such hypernudging, competition law may prove to be a logical instrument to deal with anticompetitive effects ex-post. Thus, even though

⁶⁹ Note, while the draft text of the DMA included self-preferencing in the “obligations for gatekeepers susceptible of being further specified under article 8” through the dialogue with the European Commission, based on unique circumstances of the gatekeeper.

⁷⁰ Among others, see: Rupprecht Podszun and Philipp Bongartz, ‘The digital markets act: moving from competition law to regulation for large gatekeepers’ (2021) 10(2) *Journal of European Consumer and Market Law* 60; Valeria Falce, ‘Competition policy and Digital Markets Act. Converging agendas’ (2021) *European Journal of Privacy Law & Technologies* 10; Alexandre de Stree and Pierre Larouche, ‘The European Digital Markets Act: A Revolution Grounded on Traditions’ (2021) 12(7) *Journal of European Competition Law & Practice* 542; Assimakis Komninos, ‘The Digital Markets Act: How Does it Compare with Competition Law?’ (2022) <<https://ssrn.com/abstract=4136146>> accessed 24 October 2022.

⁷¹ Center for Competition Policy, ‘The General Court’s Google Shopping ruling’, comment by Damien Geradin, <<https://www.youtube.com/watch?v=QmXbfGSOlqo>> accessed 7 April 2022.

⁷² Reference to intra-platform hypernudging, see: Morozovaite (n 3).

⁷³ Stuart Mills, ‘Finding the ‘nudge’ in the hypernudge’ (2022) 71 *Technology in Society* 102117.

the DMA may capture a great deal of harmful self-preferencing practices in digital markets, with the evolution of digital technologies and new ways developed to reach anticompetitive outcomes, the boundaries of article 102 TFEU may be tested further. As discussed in section 4.2, the Court's approach indicates a degree of malleability to it.

3. Hypernudging by Voice Assistants as a Threat to Competitive Markets

This section will examine why VAs are uniquely positioned to engage in dynamically personalised user steering – *hypernudging* – processes, which can be used to shape consumers' preferences and in turn market behaviour. They are designed to address two essential needs that consumers have when shopping online – convenience and trust.⁷⁴ When hypernudging by VAs allows for seamless consumer steering towards outcomes that do not fully align with their interests, the concerns over distortion of competition occur.⁷⁵

3.1. The Mechanics of Hypernudging by Voice Assistants

The premise of this article is that VAs of the leading providers are uniquely positioned to engage in a highly dynamically personalised user steering – *hypernudging* – towards specific market outcomes, such as purchasing decisions, and to seamlessly shape their preferences. Theoretically, hypernudging is built on the insights of linkages between behavioural economics and information systems (IS) literature, which demonstrates that people's behaviour is influenced by their environmental and cognitive constraints.⁷⁶ Thus, their behaviour may be shaped by external actors – the choice architects – that can re-assemble their choice environments based on their specific context and circumstances, such as personal characteristics.⁷⁷ Hypernudging processes could be visualised as a staircase: “it is no longer about a single step placed by the choice architect to steer the user, but multiple steps that might come in different shapes, at different times, all with the goal to gently push her towards a specific outcome”.⁷⁸ In other words, it is a system of dynamically personalised nudges, not a single design feature or behavioural intervention.⁷⁹

⁷⁴ Wolbers and Walter (n 25), 11.

⁷⁵ Ryan Calo, ‘Digital Market Manipulation’ [2014] 82 *George Washington Law Review* 995.

⁷⁶ Herbert A Simon, ‘A behavioral model of rational choice’ (1955) 69(1) *The quarterly journal of economics* 99; Viktorija Morozovaite, ‘Two sides of the digital advertising coin: putting hypernudging into perspective’ (2021) 5(2) *Markets and Competition Law Review* 105.

⁷⁷ Yeung (n 3); Cass R Sunstein and Richard H Thaler, *Nudge: Improving decisions about health, wealth, and happiness* (2nd edn, Penguin Books 2009).

⁷⁸ Morozovaite (n 76), 117.

⁷⁹ Morozovaite, (n 3); Mills (n73).

As discussed earlier, general-purpose VAs enable users to access a broad range of functions. At their core, however, many relate to providing information and helping execute pre-determined tasks.⁸⁰ User profiling is an integral part of the functioning of VAs to achieve successful service personalisation. The goal is to move away from simply responding to a query or executing a task but instead determining and predicting user's needs to give them a dynamically personalised experience, based on their preferences, needs, behaviours and interests.⁸¹ A user profile provides information representing user's specific characteristics and context.⁸² The human voice is loaded with information about the user, opening opportunities for voice profiling. Rich research shows that voice holds the cues to detecting not only physical parameters of a person, such as their gender, weight, or height, but also physiological (age, heart rate), demographic (nativity, education, skin colour), medical (general state of the health, autoimmune/genetic/neurological disorders), behavioural (perception of dominance, dynamism, leadership, sexual orientation), and environmental parameters as well as personality and emotions.⁸³ Furthermore, the probability of two people, even identical twins, sharing precisely the same voice is highly improbable.⁸⁴

It is unsurprising that the terms of service of the (leading) VA providers allow companies to process and retain user interactions such as voice inputs to, as they state, "provide, personalize and improve [their] services".⁸⁵ When it comes to user profiling, however, the critical point relates to the *processing* part. Regardless of the quantity of information, the accuracy of the user profile ultimately depends "on the user profiling process in which the information gathered, organized and interpreted to create the summarization and the description of the user".⁸⁶ Big technology companies that dominate the VAs' market are well-positioned to profile users accurately. Due to the workings of their respective platform ecosystems, they have not only amassed vast amounts of user data across their many business domains but also are the leaders in artificial intelligence (AI) and machine learning (ML) algorithms.⁸⁷ Furthermore, users have an incentive to share their information across the services by the same provider on the cloud, as this creates synergies among those services and allows for

⁸⁰ Preliminary Report - Sector Inquiry into Consumer Internet of Things (n 13), para 27.

⁸¹ Ayse Cufoglu, 'User profiling-a short review' (2014) 108(3) *International Journal of Computer Applications* 1, 1 and 7.

⁸² *Ibid.*

⁸³ Rita Singh, *Profiling humans from their voice* (Springer 2019) 85-120.

⁸⁴ *Ibid.*, 63-65.

⁸⁵ Turow (n 9), 73; Alexa Terms of Use, para 1.3 <<https://www.amazon.com/gp/help/customer/display.html?nodeId=201809740>> accessed 25 March 2022.

⁸⁶ Cufoglu (n 81), 1.

⁸⁷ It is noteworthy, that at the time of writing the technology is still developing; when reflecting on their interactions with voice assistants, users expressed that the communication is not up to par in reflecting the complexities of human language and interpretation error for more nuanced queries remains common. See: Chen and others (n 23), 134.

better functionality for the user. For instance, if a busy parent asks Amazon Alexa to order household items, they may want their VA to have access to their previous purchasing history. They may also be interested in their child's activity and time spent on Twitch (owned by Amazon) or want entertainment while cooking with Amazon's Prime Video in the background. While many studies have flagged the privacy concerns related to using VAs,⁸⁸ it also shows that, for many, these do not outweigh the benefits of having one.⁸⁹ Convenience remains one of the most prioritised consumer values, driving e-commerce and, more broadly, the digital economy.⁹⁰

User experience is a critical factor, revealing the potency of hypernudging opportunities by VAs. In addition to convenience, trust also plays an essential role in consumers' purchasing decisions online.⁹¹ VAs are purposely designed to *feel* normal – they can express disappointment and excitement or adjust their voice and tone according to the customer's wishes.⁹² Psychological studies confirm that subconsciously people react to devices with human-like qualities as if they were human; they are also often referred to in human pronouns.⁹³ Thus, the customer forms an emotional connection with the device, albeit a one-sided one.⁹⁴ Studies have further shown that human-like characteristics in non-human objects can induce a high-level of trust and allow a person to sustain a stronger relationship with them.⁹⁵ To illustrate, a recent study showed that a robot asking people not to shut them off ignited a social response from the participants.⁹⁶ Children, in particular, tend to view a VA as a social partner and

⁸⁸ M Vimalkumar and others, "Okay google, what about my privacy?": User's privacy perceptions and acceptance of voice based digital assistants' (2021) 120 *Computers in Human Behavior* 106763; Ronald Leenes and Silvia De Conca, 'Artificial intelligence and privacy—AI enters the house through the Cloud' in Woodrow Barfield and Ugo Pagallo (eds), *Research handbook on the law of artificial intelligence* (Edward Elgar Publishing 2018); Karolina Ewers, Daniel Baier, and Nadine Höhn, 'Siri, Do I Like You? Digital voice assistants and their acceptance by consumers' (2020) 4(1) *SMR-Journal of Service Management Research* 52, 55.

⁸⁹ Chen and others (n 23), 135.

⁹⁰ Convenience is conceptualized as "consumers' time and effort perceptions related to buying or using a service". See: Leonard L Berry, Kathleen Seiders, and Dhruv Grewal, 'Understanding service convenience' [2002] 66(2) *Journal of marketing* 1, 1.

⁹¹ Wolbers and Walter (n 25), 11.

⁹² This is so specifically in relation to the developments in contextual voice experiences.

⁹³ On anthropomorphism and technology, see: Pankaj Aggarwal and Ann L McGill, 'When brands seem human, do humans act like brands? Automatic behavioral priming effects of brand anthropomorphism' (2012) 39(2) *Journal of consumer research* 307-323; Nicolas Pfeuffer and others, 'Anthropomorphic information systems' (2019) 61(4) *Business & Information Systems Engineering* 523.

⁹⁴ Vito Tassiello, Jack S Tillotson, and Alexandra S Rome, "'Alexa, order me a pizza!": The mediating role of psychological power in the consumer-voice assistant interaction" (2021) 38(7) *Psychology & Marketing* 1069, 1070.

⁹⁵ Balakrishnan and Dwivedi (n 21), 6.

⁹⁶ Poushneh (n 14), 1.

want to get to know them.⁹⁷ It is also not uncommon for consumers to pose queries about all kinds of intimate questions, including asking to look up illness symptoms or baby names, that indicate trust and allow the platform to glean into their future needs.⁹⁸

It is noteworthy that even though consumers effectively give up some of their decision-making powers to the algorithmic agent,⁹⁹ they may retain a sense of control over their digital assistant's decisions due to the narrative of a master-servant dynamic. This perceived power is crucial for increasing consumer confidence and the technology's adaptability.¹⁰⁰ People's status can affect their wariness to the VAs as "[a]nthropomorphism increases risk perception for those with low power, whereas it decreases risk perception for those with high power".¹⁰¹ Similarly, consumers demonstrate increased and more enjoyable interactions with VAs when they feel superior to their devices. In effect, this perceived power mediates their willingness to purchase products with the help of a VA.¹⁰²

The state of the art of voice-enabled consumer profiling combined with the design of VAs' technology point to potent consumer influencing opportunities. Leading VAs' providers can engage in such influencing in a large-scale systemic manner. While it might be tempting to assign the potential adverse effects of hypernudging by VAs to fall under the remit of regulation as different regulatory fields play a positive role in safeguarding against harm, they are usually not as such concerned with competition concerns.¹⁰³ A further distinction can be made between individual and systemic harms, with relevant regulations to a large extent covering the former.¹⁰⁴ Competition law may complement regulation to address systemic effects on the market. The following section will proceed to showcase why hypernudging by VAs should, at the very least, come under the European competition authorities' radar.

⁹⁷ George Terzopoulos and Maya Satratzemi, 'Voice assistants and smart speakers in everyday life and in education' (2020) 19(3) *Informatics in Education* 473, 478.

⁹⁸ Laura Lovett, 'Consumers interested in voice tech for health, adoption remains low, survey reports' (*mobihealthnews*, 31 October 2019) <<https://www.mobihealthnews.com/news/north-america/consumers-interested-voice-tech-health-adoption-remains-low-survey-reports>> accessed 15 December 2022.

⁹⁹ Michal S Gal, 'Algorithmic challenges to autonomous choice' (2018) 25 *Michigan Technology Law Review* 59.

¹⁰⁰ Poushneh (n 96), 7.

¹⁰¹ Sara Kim and Ann L McGill, 'Gaming with Mr. Slot or gaming the slot machine? Power, anthropomorphism, and risk perception' (2011) 38(1) *Journal of Consumer Research* 94, 104.

¹⁰² Tassiello, Tillotson and Rome (n 94), 1071.

¹⁰³ Amelia Fletcher, 'The EU Google decisions: extreme enforcement or the Tip of The Behavioral Iceberg?' (2019) *CPI Antitrust Chronicle* 1, 4.

¹⁰⁴ Morozovaite (n 3).

3.2. Hypernudging Effects on Competitive Digital Markets

The assessment of hypernudging (by VAs) under European competition law necessitates demonstrating that the conduct actually or potentially harms the competitive process. Following modernisation, European competition law enforcement is guided by economic principles and is focused on safeguarding economic values, placing consumer welfare at its forefront.¹⁰⁵ In the EU it is equated to consumer surplus – it is not enough that a firm’s behaviour would increase producer surplus due to efficiencies, possibly at the expense of consumers.¹⁰⁶ With the consumer at the heart of European competition policy,¹⁰⁷ the theories of harm that trigger Article 102 TFEU enforcement generally relate to negative effects upon consumer welfare, including those on price, output, choice, quality, or innovation.¹⁰⁸ European courts have not explicitly endorsed consumer welfare as an overarching goal of European competition law but embraced a more pluralistic approach.¹⁰⁹ Competition rules are not to be applied in isolation from other Union policies but instead their interpretation requires balancing of different Treaty’s objectives against each other.¹¹⁰

With the changing nature of consumer engagement, trusted VAs are well-positioned to hypernudge consumers towards commercial decisions. One could argue that in a commercial context, critical functions of VAs are to limit consumers’ search and information costs. They may facilitate better market transparency and discovery of new, and better, products and services.¹¹¹ VAs are expected to assist consumers best when recommending items or shopping for them in the circumstances where “(i) there is effective competition in [voice assistants] market, (ii) the [voice assistant supplier]

¹⁰⁵ David J Gerber, ‘Two forms of modernization in European competition law’ (2008) *Fordham International Law Journal* 1235; Okeoghene Odudu, ‘The wider concerns of competition law’ (2010) 3(3) *Oxford Journal of Legal Studies* 599, 600; Dzmitry Bartalevich, ‘The influence of the Chicago School on the Commission’s Guidelines, Notices and Block Exemption Regulations in EU competition policy’ (2016) 54(2) *Journal of Common Market Studies* 267.

¹⁰⁶ Anna Gerbrandy and Rutger Claassen, ‘Rethinking European Competition Law: From a Consumer Welfare to a Capability Approach’ (2016) 12(1) *Utrecht Law Review* 1; Ioannis Lianos, ‘Some reflections on the question of the goals of EU competition law’ in Ioannis Lianos and Damien Geradin (eds) *Handbook on European Competition Law: Substantive Analysis* (Edward Elgar Publishing 2013); Victoria Daskalova, ‘Consumer Welfare in EU Competition Law: What Is It (Not) About?’ (2015) *Competition Law Review* 131, 144-145.

¹⁰⁷ Commission, ‘Neelie Kroes Member of the European Commission in charge of Competition Policy Preliminary Thoughts on Policy Review of Article 82 Speech at the Fordham Corporate Law Institute New York, 23 September 2005’ (23 September 2005) <https://ec.europa.eu/commission/presscorner/detail/en/SPEECH_05_537> accessed 14 December 2022.

¹⁰⁸ Crémer, de Montjoye and Schweitzer (n 49), para 51.

¹⁰⁹ Lianos (n 106); Anne C Witt, ‘Public policy goals under EU competition law – now is the time to set the house in order’ (2012) 8(3) *European Competition Journal* 443.

¹¹⁰ Witt (n 109). See also, recent rhetoric on fairness and fair competition in *Google and Alphabet v Commission (Google Shopping)* (n 7), paras 432-433.

¹¹¹ Jan Trzaskowski, ‘Data-driven value extraction and human well-being under EU law’ (2022) *Electronic Markets* 449; Gal (n 99), 61.

is independent – no integration or contracts with store operators, and (iii) the user may perfectly control the VA's shopping".¹¹² However, vertically integrated companies have incentives to introduce selection bias that favours their (partners') interests over the consumers' interests, and individuals may not be aware of such misalignment.¹¹³ In addition, automated systems may contain imperfections that unintentionally steer consumers against their interest.¹¹⁴

While the normative discussion on what constitutes consumer's "true interest" is outside the scope of this article, some observations on decision theory are helpful when considering hypernudging scenarios in digital markets. From neo-classical economic theory perspective, which is the basis of the current European competition policy, it is generally assumed that consumer's revealed preferences (actions) reflect their normative preferences (actual interests).¹¹⁵ Accordingly, when consumers follow VA's recommendations or allow it to shop for them, the assumption is that the VA serves their preferences and therefore contributes to maximising consumer welfare.

However, behavioural insights show that, at least in some cases, revealed preferences cannot be treated as normative. The dichotomy between revealed and normative preferences is apparent in decision-making situations where: (1) consumer is exposed to a default, and therefore is making a passive choice; (2) decisions are complex, requiring consumer incur cognitive costs; (3) consumer lacks personal experiences; (4) marketing with branded commodities is involved; (5) consumer follows impulses and does not account for the long-term consequences.¹¹⁶ Thus, consumer choices do not always equate to their preferences, instead they could be viewed as a combination of outcome of preferences and application of some heuristics, as well as decision-making errors.¹¹⁷ Accordingly, people's decision-making is heavily influenced by environmental

¹¹² Noskova (n 15), 5.

¹¹³ Maurice E Stucke and Ariel Ezrachi. 'How digital assistants can harm our economy, privacy, and democracy' (2017) 32(3) *Berkeley Technology Law Journal* 1239, 1257; and interesting on Apple's self-preferencing in App Store, and how it resulted in welfare-reduction for consumers, see: Xuan Teng, 'Self-preferencing, quality provision and welfare in mobile application markets' (2022) CESifo Working Paper No.10042, <<https://ssrn.com/abstract=4259639>> accessed 9 August 2023.

¹¹⁴ Melumad and others, 'Technology-augmented choice: How digital innovations are transforming consumer decision processes' (2020) 7(3) *Customer Needs and Solutions* 90, 97.

¹¹⁵ John Beshears and others, 'How are preferences revealed?' (2008) 8-9 *Journal of Public Economics* 1787.

¹¹⁶ *Ibid.*, 1788-1789.

¹¹⁷ *Ibid.*

and cognitive constraints – they can be (*hyper*)nudged towards market outcomes that are contrary to their self-interest.¹¹⁸

In this regard, consider the recent empirical study which demonstrated how conversational robo advisors influence consumers' perception of trust, the evaluation of a financial services firm, and decision-making. The results indicated that consumers are significantly more likely to follow investment advice from a conversational robo advisor compared to non-conversational one, even if the investment advice was inconsistent with their risk profile or invoked larger annual management fees.¹¹⁹ While financial products are highly complex even for sophisticated consumers, potentially influencing their inclination to follow the advice, the findings should raise curiosity for future research as to what extent consumers do follow the recommendations of VAs for unfamiliar products and services without double-checking whether their attributes fit their interests or exploring alternatives.

When it comes to competition law analysis, hypernudging, and consumer influencing more generally, are not directly addressed by European competition law. Even though personalisation – one of the key features of hypernudging – has gained some traction in the literature,¹²⁰ its welfare effects are ambiguous and no article 102 TFEU investigation directly about personalisation has been opened in the EU at the time of writing.

¹¹⁸ To illustrate the power of context in steering consumers' behavior consider the example of addictive design. The term emerged in relation to the design of social media digital user interfaces, such as Instagram, which deliberately leverage human attentive and affective systems to make them stay and engage with the platform longer, often at the expense of their mental health, whilst being exposed to ads. For discussion, see: Center for Humane Technology, 'Ledger of Harms' (June 2021) <<https://ledger.humanetech.com/>> accessed 6 April 2022; James N Rosenquist, Fiona M Scott Morton and Samuel N Weinstein, 'Addictive technology and its implications for antitrust enforcement' (2021) 100 *The North Carolina Law Review* 431; Nir Eyal, *Hooked: How to build habit-forming products* (Penguin Group 2014); Georgia Wells, Jeff Horwitz and Deepa Seetharaman, 'Facebook knows Instagram is toxic for ten girls, company documents show' (*The Wall Street Journal*, 14 September 2021) <<https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739>> accessed 15 December 2022.

¹¹⁹ Christian Hildebrand and Anouk Bergner, 'Conversational robo advisors as surrogates of trust: onboarding experience, firm perception, and consumer financial decision making' (2021) 49(4) *Journal of the Academy of Marketing Science* 659.

¹²⁰ Personalised pricing, as a form of price discrimination, was one of the first personalisation practices explored by academics and practitioners in the competition law field. In this context, the personalisation of online prices and offers increases discrimination between consumers interacting via digital interfaces. See the literature on personalised pricing and its ambiguous effects on consumer welfare, fairness and social justice: Wolf Sauter, 'A duty of care to prevent online exploitation of consumers? Digital dominance and special responsibility in EU competition law' (2020) 8(2) *Journal of Antitrust Enforcement* 406-427; OECD, 'Personalised pricing in the digital era' (2018) <<https://www.oecd.org/competition/personalised-pricing-in-the-digital-era.htm>> accessed 7 August 2023; Christopher Townley, Eric Morrison and Karen Yeung, 'Big data and personalised price discrimination in EU competition law' (2017) 36 *Yearbook of European Law* 683, 699; Fabrizio Esposito, 'Making personalised prices pro-competitive and pro-consumers' (2020) CAHIERS DU CeDIE WORKING PAPERS 2020/02; Botta and Wiedemann (n 8).

Furthermore, most contributions focus on collection of big data, personalised pricing and behavioural manipulation vis-à-vis exploitative abuses, leading with the argument that consumers are harmed directly.

This article deviates from existing literature by showcasing that hypernudging could lead to potential exclusionary effects on the market. Even though consumers may experience economic harm by being exposed to biased dynamically personalised offerings that deviate from their best interests, competition in the downstream market may, by the same token, be harmed due to firms using behavioural insights on a large scale to shape market's demand side. Therefore, when it comes to consumer influencing, one can establish a link between exploitative and exclusionary effects; the former reinforces the latter.

It should be noted that the connection between exclusion and exploitation has been implicitly touched upon in 2019 Bundeskartellamt's decision against Facebook, which was appealed and ultimately referred for a preliminary ruling to the ECJ.¹²¹ It was found that Facebook abused its dominance in the market for social networks by using its terms of service to collect consumers' personal data on third party websites to provide greater personalisation of services. According to the Federal Supreme Court, Facebook's personalised user experience was equivalent to "imposed extension of services", as consumers were forced to accept on- and off-Facebook data processing as a whole package irrespective of whether they wanted such extension.¹²² This exploitative behaviour was found to impede competition by limiting consumer choice and degrading service quality.¹²³ The conduct was subsequently considered to indirectly contribute to creating exclusionary effects, as by virtue of imposed unfair terms Facebook was able to amass huge quantities of consumer data, raising barriers to entry and expansion for competitors on the advertising side of the market.¹²⁴ In other words, exclusion was reinforced by exploitative conduct. Similarly, a nexus between exploitative and exclusionary effects could be identified in the context of hypernudging by VAs.

¹²¹ Bundeskartellamt, 'Bundeskartellamt prohibits Facebook from combining user data from different sources' (7 February 2019), < https://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Pressemittelungen/2019/07_02_2019_Facebook.html > accessed 14 December 2022; Case C-252/21 *Meta Platforms Inc., formerly Facebook Inc., Meta Platforms Ireland Limited, formerly Facebook Ireland Ltd., Facebook Deutschland GmbH v Bundeskartellamt, interveners: Verbraucherzentrale Bundesverband e.V.* [2022] ECLI:EU:C:2022:704, Opinion of AG Rantos.

¹²² Liza Lodvdahl Gormsen and Jose T Lianos, 'Facebook's exploitation and exclusionary abuses in the two-sided market for social networks and display advertising' (2022) 10(1) *Journal of Antitrust Enforcement* 90, 102; Klaus Wiedemann, 'A matter of choice: the German Federal Supreme Court's interim decision in the abuse of dominance proceedings Bundeskartellamt v Facebook (Case KVR 69/19)' (2020) 51 *ICC – International Review of Intellectual Property and Competition Law* 1168, 1170.

¹²³ Lodvdahl Gormsen and Lianos (n 122), 102.

¹²⁴ *Ibid.*, 90.

Coming back to the previous example, once a busy parent requests to order or recommend diapers, a VA may point the consumer towards the home (or partner) brand, reciting their best-selling points. It may do so in a way that frames the product to meet individual consumer's requirements; it may adjust recommendations according to the consumer's mood; or, in time, it may recognise a good moment to request a consumer to make it an automatically re-occurring purchase. In all these scenarios, the VA would be hypernudging an individual towards their profit-driven choices that may not accurately reflect consumer's interests and preferences.¹²⁵ What makes hypernudging by VAs more challenging to identify and assess than more traditional forms of steering, such as search results by a ranking algorithm or even a personalised recommendation delivered by a recommender system, is that the hypernudging mechanism allows presenting multiple recommendations at different times, perhaps through different channels within the respective platform ecosystem the VA belongs to. Consequently, the consumer steering becomes not only more covert but also more potent.

The abovementioned scenario points to problematic market-level outcomes when VAs engage in a systemic diversion of consumer attention and consequently distort demand, especially in the context of biased recommendations that favour some goods and services over the others.¹²⁶ Better-quality and value offers may end-up hidden from consumers, resulting in loss of consumer surplus and profits for competitors.¹²⁷ However, the firms are incentivised not only by increasing their profits, but also the possibility to control the dissemination of innovations in their respective platform ecosystems, thereby limiting the risk of being disrupted.¹²⁸

The systemic diversion of attention has been brought up in abuse of dominance assessments as an issue that could lead to exclusionary effects and therefore reduction of consumer choice. In already discussed *Google Android* decision (see section 2.2.2), which concerned tying Google Search app with the Play Store, one of the main points of contention was examining the extent to which granting a default status to an app

¹²⁵ Gal (n 99), 66.

¹²⁶ Melumad and others (n 114), 99.

¹²⁷ For example, a recent empirical study by Xuan Teng (2022) examined self-preferencing in the US app store markets from April to August 2019. It found that Apple's ownership gave it an advantage over independent apps in the search results. Eliminating the identified self-preferencing increases consumer welfare by 2.2 million dollars and independent developer profits by 1.9 million dollars. See: Teng (n 113).

¹²⁸ Frédéric Marty, 'Competition and Regulatory Challenges in Digital Markets: How to Tackle the Issue of Self-Preferencing?' (2021) GREDEG Working Papers 2021-20. In reference to the way these platforms manage their consumer demand, Lianos compares them to centrally planned mini economies. See: Lianos (n 4).

will result in significant changes in its levels of usage.¹²⁹ The Commission noted that by foreclosing access to rival search engines the company was able improve their search service by gathering more search queries and user data. Thus, by securing a user's attention on one market, the company had an additional advantage over rivals in other markets within its platform ecosystem.¹³⁰ This was confirmed by the General Court on 14 September 2022.¹³¹

Notably, VAs are different from other intermediaries in the “attention economy”, such as social media platforms.¹³² They generally do not aim to extend consumer's time engaging with them. For instance, Amazon has limited advertising options for Alexa, while Google prohibits advertising via its VA, despite earlier attempts to do so.¹³³ Instead, VAs promise to serve consumers in micro-moments and leave them with more time and cognitive resources to spend elsewhere. At the same time, VAs continuously listen to consumers' mundane interactions and may divert their attention to products and services closely tied to VAs' respective platform ecosystems. This opens doors for more subtle influencing than other obvious forms of advertising.

Convenience seeking consumers' incentives to critically evaluate presented offers, or look out for alternatives, may be further diminished by the personalisation aspect of VA's recommendations. In the user-centric digital economy, the ultimate aim of mass segmentation is having consumers that each constitute their own “unique markets”;¹³⁴ the concern is that consumers will be stuck in “targeting pockets”¹³⁵ where they are not exposed to diverse assortment of products and services. This exacerbates an information asymmetry not only between the consumer and the firm, but also the firm and its business customers.¹³⁶ Since consumers appreciate convenience and VAs typically present a single offer at a time (with a possibility to reject that offer to hear

¹²⁹ Robert Stillman and others, ‘Google Android: European ‘techlash’ or milestone in antitrust enforcement’ (*vox.eu*, 27 July 2018) <<https://vox.eu.org/article/google-android-european-techlash-or-milestone-antitrust-enforcement>> accessed 15 December 2022.

¹³⁰ Giorgio Monti, ‘Attention intermediaries: regulatory options and their institutional implications’ (2020) TILEC Discussion Paper No. DP2020-018, 8.

¹³¹ *Google Android* (n 57).

¹³² Tim Wu, ‘Blind spot: The attention economy and the law’ (2018) 82 *Antitrust Law Journal* 771; John M Newman, ‘Antitrust in Attention Markets: Definition, Power, Harm’ (2020) University of Miami Legal Studies Research Paper 3745839.

¹³³ Jesus Martin, ‘Advertising in voice interfaces’ (14 July 2020) <<https://uxdesign.cc/advertising-in-voice-interfaces-4b1ca14fa28b>> accessed 15 December 2022.

¹³⁴ Karen Yeung, ‘Five fears about mass predictive personalisation in an age of surveillance capitalism’ (2018) *International Data Privacy Law* 1, 10; Graef (n 8); Trzaskowski (n 111).

¹³⁵ Wachter and others (2022) advocate for a new measure “concentration after personalization index” (CAPI) to aid in assessing competitive dynamics. See: Sandra Wachter and others, ‘The Concentration-after-Personalisation Index (CAPI): Governing Effects of Personalisation Using the Example of Targeted Online Advertising’ (2022) <<https://ssrn.com/abstract=4084457>> accessed 14 December 2022.

¹³⁶ Trzaskowski (n 111).

another one), non-discriminatory conditions for being recommended are particularly important for business customers whose sales depend on being discovered.¹³⁷

To illustrate the competitive concerns related to hypernudging by VAs, a parallel could be drawn with the recent Commission’s investigation into Amazon’s “Buy Box.” In its preliminary view, the Commission held that the company artificially favoured its own retail business or of those sellers that use Fulfilment-by-Amazon (FBA) service, when selecting a winner of the “Buy Box”.¹³⁸ Being crowned as a winner is important for marketplace sellers as prominent placing of their offer stimulates a vast majority of sales. In December 2022, the Commission accepted Amazon’s proposed commitments, including the application of non-discriminatory conditions and criteria for featured offer and the display of a second offer on the offer display.¹³⁹ As will be further discussed (see section 4.2), the Commission and the Courts start to recognise the power of biased prominent product placing in digital environments for potentially distorting consumer demand. The difference between the abovementioned “Buy Box” example and VAs is that in the former scenario, consumers are simultaneously exposed to the featured offer and several alternatives that match their search criteria on the Amazon Marketplace webpage or app interface. The visual images and reviews may be helpful in supplementing decision-making, often they must still actively take a few steps before the product is purchased. In contrast, with VAs, this power of biased prominent product placing is further exacerbated since consumers are exposed to one product at the time. Without visual cues and very little information provided, they effectively rely on the VAs recommendation even more.

¹³⁷ Noga Blickstein Shchory and Michal S Gal, ‘Voice Shoppers: From Information Gaps to Choice Gaps in Consumer Markets’ (2022) 88(1) *Brooklyn Law Review* 111. This is also important in relation to behavioral research on frictions – people like to paddle the path of least resistance.

¹³⁸ Commission, ‘AT.40703 Amazon - Buy Box’ (Opening of Proceedings) (10 November 2020) <https://ec.europa.eu/competition/antitrust/cases/dec_docs/40703/40703_67_4.pdf> accessed 9 August 2023; Commission, ‘Antitrust: Commission sends Statement of Objections to Amazon for the use of non-public independent seller data and opens second investigation into its e-commerce business practices’ (20 November 2020) <https://ec.europa.eu/commission/presscorner/detail/en/ip_20_2077> accessed 15 December 2022; Petar Petrov, ‘The European Commission Investigations against Amazon – a Gatekeeper Saga’ (*Kluwer Competition Law Blog*, 18 December 2020) <http://competitionlawblog.kluwercompetitionlaw.com/2020/12/18/the-european-commission-investigations-against-amazon-a-gatekeeper-saga/#_ftn2> accessed 15 December 2022; see also a recent UK antitrust class action for algorithmic abuse in “Buy Box”: CPI, ‘Amazon faces UK Antitrust Class Action for Algorithm Abuse’ (20 October 2022) <<https://www.competitionpolicyinternational.com/amazon-faces-uk-antitrust-class-action-for-algorithm-abuse/>> accessed 15 December 2022.

¹³⁹ Amazon, ‘Case COMP/AT.40462 and Case COMP/AT.40703 Commitment Proposal’ (2022) <https://ec.europa.eu/competition/antitrust/cases1/202229/AT_40703_8414012_1177_3.pdf> accessed 15 December 2022; Commission, ‘Antitrust: Commission accepts commitments by Amazon barring it from using marketplace seller data and ensuring equal access to Buy Box and Prime’ (20 December 2022) <https://ec.europa.eu/commission/presscorner/detail/en/ip_22_7777> accessed 21 December 2022.

The above discussion illustrates that hypernudging by VAs is no longer about merely influencing an individual and may lead to negative effects on the market level. Even though exploitation due to direct consumer harm has increasingly been considered a viable route that competition authorities may take in instances involving personalised services and behavioural manipulation, exclusionary effects should not be overlooked since with technological developments, the familiar abusive conduct is expected to morph and advance in form. When it comes to anticompetitive self-preferencing, hypernudging may prove to be a vehicle for more covert and potent “self-preferencing on steroids”.

4. Anticompetitive Self-preferencing Analysis of Hypernudging by Voice Assistants

Hypernudging by VAs present new challenges to the functioning of the digital markets. The concerns are well summarised by the Stigler Committee: even though consumers retain an illusion of control over their digital interfaces and decisions, it is digital platforms that have a detailed “minute-by-minute control over their interfaces and can present a façade of competition, choice, autonomy when in fact users are directed by behavioural techniques”.¹⁴⁰ Nevertheless, while consumer steering may be viewed as problematic or unethical, it does not have to constitute a competition law infringement. This section will examine the legal position of self-preferencing under European competition law and apply its legal criteria to hypernudging by VAs. Given the technological developments, ongoing UI shifts and novel ways, such as hypernudging, to engage in problematic market behaviours, this section will conclude with remaining queries about the future of anticompetitive self-preferencing.

4.1. Self-preferencing under Article 102 TFEU

Self-preferencing practices have become a contentious subject in European competition law enforcement, particularly in digital markets.¹⁴¹ Considered to be one of the flavours

¹⁴⁰ Stigler Committee on Digital Platforms (n 49), 37.

¹⁴¹ Crémer, de Montjoye and Schweitzer (n 49); Google Android (n 57); Commission (n 138); Commission, ‘Antitrust: Commission sends Statement of Objections to Apple on App Store rules for music streaming providers’ (30 April 2021) <https://ec.europa.eu/commission/presscorner/detail/en/ip_21_2061> accessed 19 August 2023; Commission, ‘Antitrust: Commission opens investigation into possible anticompetitive conduct by Google in the online advertising technology sector’ (22 June 2021) <https://ec.europa.eu/commission/presscorner/detail/en/ip_23_3207> accessed 19 August 2023; Autorità Garante della Concorrenza e del Mercato (Italian Competition Authority), ‘A528 - Italian Competition Authority: Amazon fined over € 1,128 billion for abusing its dominant position’ (9 December 2021) <<https://en.agcm.it/en/media/press-releases/2021/12/A528>> accessed 21 August 2023.

of discriminatory behaviour,¹⁴² it is broadly defined as “giving preferential treatment to one’s own products or services, or one from the same ecosystem, when they are in competition with products or services provided by other entities”.¹⁴³ The practice of self-preferencing can take two forms. The first corresponds to competitive distortions on a downstream market induced by a vertical integration of the upstream market dominant player. The second relates to preferential treatment that benefits an independent player, instead of a downstream subsidiary.¹⁴⁴

Self-preferencing is a specific technique of leveraging behaviour, which refers to the extension of an undertaking’s market power to a neighbouring market.¹⁴⁵ As such, leveraging is a generic term that is not indicative of article 102 TFEU infringement.¹⁴⁶ It may take various forms, some of them having been found abusive in the past.¹⁴⁷

With digital markets characterised by conglomeration and platform integration into vertical and neighbouring markets, the concerns over anticompetitive self-preferencing have also increased.¹⁴⁸ The platform architecture and ecosystem governance play a role in enabling digital platforms to implement self-preferencing strategies.¹⁴⁹ The incentives for such conduct emerge as self-preferencing can be profitable as soon as it protects the upstream position or allows leverage into adjacent markets.¹⁵⁰

Article 102 TFEU does not prohibit such conduct if it falls within the scope of competition on merits; each case is subject to the effects test.¹⁵¹ After all, in specific circumstances, self-preferencing is a legitimate business strategy, and giving own

¹⁴² For a summary of different forms of discrimination in European competition law, see: Inge Graef, ‘Differential Treatment in P2B relations: EU competition law and economic dependence’ (2019) 38 *Yearbook of European Law* 448.

¹⁴³ Crémer, de Montjoye and Schweitzer (n 49), 66.

¹⁴⁴ Marty (n 128), 17. See also on discrimination: R Donoghue QC, ‘The quiet death of second line discrimination as an abuse of dominance: Case C-525/16 MEO’ (2018) 9 *Journal of European Competition Law and Practice* 443, 444; see also Graef on the analytical framework of differentiated treatment which includes a hybrid option: Graef (n 142).

¹⁴⁵ Gergely Csurgai-Horvath, ‘Is it unlawful to favour oneself?’ (2022) *Hungarian Journal of Legal Studies* 4.

¹⁴⁶ *Google and Alphabet v Commission (Google Shopping)* (n 7), paras 162-163.

¹⁴⁷ In particular in relation to abuses involving tying and bundling, unfair trading conditions and essential facilities doctrine, thereby providing the contours for limits to preferential treatment. See: Nicolas Petit, ‘Theories of self-preferencing under article 102 TFEU: a reply to Bo Vesterdorf’ (2015) *Competition Law and Policy Debate* 1, 9. For opposing view, see: Bo Vesterdorf, ‘Theories of self-preferencing and duty to deal—two sides of the same coin?’ (2015) 1 *Competition Law and Policy Debate* 4.

¹⁴⁸ Gergely Csurgai-Horvath (n 145), 6.

¹⁴⁹ Cristina Caffarra, ‘Google Shopping: a shot in the arm for the EC’s enforcement effort, but how much will it matter?’ (*e-Competitions Bulletin*, 13 December 2021) <<https://www.concurrences.com/fr/bulletin/special-issues/big-tech-dominance/104053>> accessed 15 December 2022.

¹⁵⁰ Marty (n 128), 17.

¹⁵¹ Crémer, de Montjoye and Schweitzer (n 49), 66.

products or services preferential treatment could be viewed as a reward for the firm's management that generates efficiencies for both the platform and consumers. A typical self-preferencing example includes supermarkets introducing home brand products in their assortment, which creates more choices and lower price offerings for consumers, increasing welfare.¹⁵² However, such an example in a brick-and-mortar context does not account for the complexities of the digital markets where market power is not only present, unlike most supermarket scenarios, but is also reinforced by the dynamics of intricately connected platform ecosystems, which may lead to a distortive effect on downstream markets.¹⁵³ In markets characterised by high barriers to entry with a specific platform serving as an intermediation infrastructure, clear benchmarks for identifying anticompetitive self-preferencing are ever-more important.¹⁵⁴

In practice, few abuse of dominance cases have focused on the self-preferencing theory of harm.¹⁵⁵ However, in the watershed *Google Shopping* judgement, the General Court for the first time confirmed that self-preferencing constitutes an independent form of abuse, differentiating it from other forms of leveraging cases, such as refusal to deal.

4.2. A Turning Point: Google Shopping

In November 2021, the General Court delivered its long-awaited *Google Shopping* judgement, described as an “edifice of article 102 TFEU enforcement in digital space”.¹⁵⁶ It confirmed the Commission's decision, where the self-preferencing behaviour was for the first time sanctioned in an algorithmic context, building upon the “equal treatment” principle of European Union law.¹⁵⁷ Google was fined 2.42 billion euros for favouring its comparison-shopping service compared to competing comparison-shopping services on its general search results pages.¹⁵⁸ In effect, the company systemically directed (nudged) consumers towards its service in a secondary market.¹⁵⁹

Google's behaviour consisted of two elements: the company was found to have consistently displayed its own comparison shopping services among the most prominent

¹⁵² Ibid; Francine Lafontaine and Margaret Slade, ‘Vertical Integration and Firm Boundaries: The Evidence’ (2007) 45 *Journal of Economic Literature* 629.

¹⁵³ Lianos (n 4).

¹⁵⁴ Crémer, de Montjoye and Schweitzer (n 49), 66-67.

¹⁵⁵ OECD ‘Abuse of dominance in digital markets’ (2020), 54 <www.oecd.org/daf/competition/abuse-of-dominance-in-digital-markets-2020.pdf> accessed 26 October 2022.

¹⁵⁶ Caffarra (n 149).

¹⁵⁷ *Google and Alphabet v Commission (Google Shopping)* (n 7), para 155.

¹⁵⁸ Summary of Commission Decision relating to the proceeding under Article 102 of the Treaty on the Functioning of the European Union and Article 54 of the EEA Agreement (Case AT.39740 *Google Search (Shopping)*) OJ C9/11, paras 1 and 31.

¹⁵⁹ Nicolo Zingales, ‘Antitrust intent in an age of algorithmic nudging’ (2019) 7(3) *Journal of Antitrust Enforcement* 386.

results on general search results pages and simultaneously actively demoted competing comparison shopping services on those results pages.¹⁶⁰ In this context, the Court started its analysis by rejecting “leveraging” as a relevant theory of harm here by stating that it is not a specific type of abuse but a more generic term encompassing several different practices.¹⁶¹

The Court did not lie down a universal criterion for identifying a behaviour as anticompetitive self-preferencing. Instead, it proceeded by assessing the context in which the alleged abuse took place, focusing Google’s conduct in relation to its business model. The distinction was made between Google’s general search results pages infrastructure, which is in principle open as “the rationale and value of a general search engine lie in its capacity to be open to results from external sources”¹⁶² and “other infrastructures referred to in the case-law, consisting of tangible or intangible assets (press distribution systems or intellectual property rights, respectively) whose value depends on the proprietor’s ability to retain exclusive use of them”.¹⁶³

Google’s conduct was considered to be abusive because it compromised the open nature of the product in question.¹⁶⁴ For a general search engine to limit “the scope of its results to its own entails an element of risk and is not necessarily rational”,¹⁶⁵ unless the company enjoys dominance that is not challengeable in the short term. By favouring its comparison-shopping services on search results pages, Google seems to have acted contrary to the “economic model underpinning the initial success of its search engine”.¹⁶⁶ In other words, Google’s behaviour ran against its business model, implying that self-preferencing could only be explained by Google’s goal to foreclose competition.¹⁶⁷

In light of the effects-based approach increasingly adopted in abuse of dominance cases, the Commission relied on extensive economic analyses and behavioural evidence showcasing the impact of Google’s conduct on competing comparison-shopping service providers’ traffic.¹⁶⁸ However, the judgement has been criticised for accepting a rather

¹⁶⁰ *Google and Alphabet v Commission (Google Shopping)* (n 7), para 187.

¹⁶¹ *Ibid*, para 163.

¹⁶² *Ibid*, para 178.

¹⁶³ *Ibid*, para 177.

¹⁶⁴ Christian Ahlborn, Gerwin van Gerven, and William Leslie, ‘Bronner revisited: Google Shopping and the Resurrection of Discrimination Under Article 102 TFEU’ (2022) *Journal of European Competition Law & Practice* 1, 3-4.

¹⁶⁵ *Google and Alphabet v Commission (Google Shopping)* (n 7), para 178.

¹⁶⁶ *Ibid*, para 179.

¹⁶⁷ Elias Deutscher, ‘Google Shopping and the Quest for a Legal Test for Self-preferencing Under Article 102 TFEU’ (2022) 6(3) *European Papers* 1345, 1353.

¹⁶⁸ *Google Search (Shopping)* (Case AT.39740) Commission Decision C(2017) 4444 final [2017] OJ C 9/11, paras 375 and 460.

low standard for establishing anticompetitive effects.¹⁶⁹ According to the Court, it was sufficient to demonstrate potential restriction of competition – or that the conduct is merely capable of leading to the foreclosure¹⁷⁰ - without applying the as-efficient-competitor (AEC) test to non-price related practice.¹⁷¹

The Court deviated from the approach taken by the England and Wales High Court in *Streetmap.eu v Google Inc.*, which had been compared to the judgement in question.¹⁷² The case concerned online map provider Streetmap.eu, which accused Google of abusing its dominant position in the search engines market by placing its Google Maps thumbnail image at the top of the search engine results page and therefore favouring own online map services over competitors. Mr. Justice Roth held that to establish an alleged infringement, Streetmap.eu needed to demonstrate the actual effect of the conduct on the market for online mapping services instead of merely a potential effect.¹⁷³ He also concluded that in such a leveraging case, “where the likely effect is on the non-dominant market, [...] the effect must be appreciable”.¹⁷⁴ Accordingly, it was held that Streetmaps.eu failed to demonstrate that Google’s conduct would have an appreciable effect on competition, and even in a contrary case, it was objectively justified.¹⁷⁵

Google Shopping adopting a more relaxed threshold for establishing anticompetitive foreclosure signals that competition law enforcers should not be forced to wait for the materialisation of actual effects on digital markets, where devising and adopting effective remedies is not only challenging but often too late.¹⁷⁶ The judgement also referenced Google’s “super-dominant position” in the general search market, which has been interpreted to be relevant in assessing the effects of the undertaking’s conduct.¹⁷⁷ The stronger the market position, the greater the likelihood of foreclosure effect.¹⁷⁸ Since the Court did not explain the use of the term “super-dominance”, there is some

¹⁶⁹ Nazzini (n 45); Ioannis Kokkoris, ‘The Google case in the EU: is there a case?’ (2017) 62(2) *The Antitrust Bulletin* 313.

¹⁷⁰ *Google and Alphabet v Commission (Google Shopping)* (n 7), para 441: “It follows from the above that, in order to find that Google had abused its dominant position, the Commission had to demonstrate the – at least potential – effects attributable to the impugned conduct of restricting or eliminating competition on the relevant markets, taking into account all the relevant circumstances, particularly in the light of the arguments advanced by Google to contest the notion that its conduct had been capable of restricting competition.”

¹⁷¹ *Google and Alphabet v Commission (Google Shopping)* (n 7), paras 518 and 538-539.

¹⁷² Thomas Graf and Henry Mostyn, ‘Do We Need to Regulate Equal Treatment? The Google Shopping Case and the Implications of its Equal Treatment Principle for New Legislative Initiatives’ (2020) *Journal of European Competition Law & Practice* 561.

¹⁷³ *Streetmap.eu Ltd v Google Inc* [2016] EWHC 253 (Ch).

¹⁷⁴ *Ibid*, paras 97-98.

¹⁷⁵ *Ibid*, para 177.

¹⁷⁶ Caffarra (n 149).

¹⁷⁷ *Google and Alphabet v Commission (Google Shopping)* (n 7), paras 182-183.

¹⁷⁸ *Konkurrensverket v TeliaSonera Sverige AB* (n 48), para 81; Guidance on the Commission’s Enforcement Priorities (n 5), para 20; D’Amico and Balasingham (n 50).

room left for questioning how anticompetitive effects would be assessed and established when an undertaking engaging in self-preferencing behaviour does not hold such a strong market position. Considering this observation, it would be interesting to consider a case concerning general purpose VAs – a market in which the assessment of market definition and dominance would be the initial hurdles in building a successful abuse of dominance case.

Finally, it is noteworthy that the Court has explicitly relied on “the general principle of equal treatment, as a general principle of EU law, [which] requires that comparable situations must not be treated differently, and different situations must not be treated in the same way, unless such treatment is objectively justified”.¹⁷⁹ The principle of equal treatment was initially rooted in the market integration rationale and covered non-discrimination of imports, foreign companies and workers.¹⁸⁰ Its scope has since broadened to include the protection of natural persons, which links it closely to safeguarding fundamental rights.¹⁸¹ The explicit mention of “equal treatment” in *Google Shopping* can be perceived as unprecedented in the context of European competition law.¹⁸² By using the general principle of equal treatment as an aid in interpreting EU primary law the Court further legitimised its decision to expand the range of conduct that is sanctioned under article 102 TFEU.¹⁸³ Furthermore, a reference could be made to the Court placing emphasis on Google’s market position in the general search market.¹⁸⁴ A specific mention was made to the common carriers’ obligations of equal treatment laid down in EU regulations on net neutrality (Regulation (EU) 2015/2120) and roaming (Regulation (EU) No 531/2012).¹⁸⁵ In combination with the “super-dominant” position

¹⁷⁹ *Google and Alphabet v Commission (Google Shopping)* (n 7), para 155.

¹⁸⁰ Mark Bell, ‘The principle of equal treatment: widening and deepening’ in Paul Craig and Grainne De Burca (eds) *The evolution of EU law* (Oxford University Press 2011) 611.

¹⁸¹ *Ibid.*, 626.

¹⁸² Lena Hornkohl, ‘Article 102 TFEU, Equal Treatment and Discrimination after Google Shopping’ (2022) 13(2) *Journal of European Competition Law and Practice* 99, 106. It is not clear why the Court did not rely on equality of opportunity – an idea closely linked to equal treatment, since the case law has consistently stressed that “a system of undistorted competition can be guaranteed only if equality of opportunity is secured between the various economic actors.” See: C-280/08 P *Deutsche Telekom v Commission* [2010] ECR I-09555, para 230; C-553/12 P *DEI v Commission* [2014] ECLI:EU:C:2014:2083, para 114; Case T-556/08 *Slovenská Pošta v Commission* [2015] ECLI:EU:T:2015:189, para 100.

¹⁸³ An excellent overview on general principles of EU law and their main functions: Koen Lenaerts and José A Gutiérrez-Fons, ‘The constitutional allocation of powers and general principles of EU law’ (2010) 47(6) *Common Market Law Review* 1629.

¹⁸⁴ The link was made with the EU’s net neutrality legislation, hinting at the acceptance of the so-called “common carrier antitrust”. See: Hornkohl (n 182).

¹⁸⁵ *Google and Alphabet v Commission (Google Shopping)* (n 7), para 180.

of Google,¹⁸⁶ the Court seems to point out that self-preferencing abuse is flexible enough to be transferred to other forms of discrimination.¹⁸⁷

4.3. Voice-based Services vis-à-vis the Future of Self-preferencing

Google Shopping considered self-preferencing as an independent type of abuse and was criticised for providing vague standards for assessing when such behaviour deviates from competition on merits.¹⁸⁸ Since the facts of the case concern an investigation opened more than a decade ago, technological developments are expected to create new ways to foreclose competitors by self-favouring in digital markets.¹⁸⁹

Hypernudging by VAs provides a powerful depiction of an advanced way to engage in self-preferencing practices that could be considered by competition authorities. However, the functioning of the general-purpose VAs' market and their impact, as well as the understanding about hypernudging are yet limited. When it comes to consumer influencing, while digital nudging is becoming a "hot topic" in the digital policy circles, the discussions are predominantly concentrated in consumer law and data protection areas, and the subject is barely touched upon in the competition law debates.¹⁹⁰ This is logical considering that, at least on a surface, the harms would firstly materialise at an individual level, leading to an infringement of rights.¹⁹¹ Nevertheless, as discussed earlier (see section 3.2), exploitation of consumer characteristics and circumstances on

¹⁸⁶ Ibid, paras 182-183.

¹⁸⁷ Hornkohl (n 182). See also discussion on Google Shopping and adherence to equal treatment principle to point towards a "neutrality regime". See: Oscar Borgogno and Giuseppe Colangelo, 'Platform and device neutrality regime: the transatlantic new competition rulebook for app stores' (2022) 67(3) *The Antitrust Bulletin* 451.

¹⁸⁸ Deutscher (n 167).

¹⁸⁹ Konstantinos Stylianou, 'Exclusion in Digital Markets' (2018) 24 *Michigan Telecommunications & Technology Law Review* 181, 187.

¹⁹⁰ Autoriteit Consument & Markt (ACM), 'Protection of the online consumer: Boundaries of online persuasion. Draft consultation document' (2020) <https://www.acm.nl/sites/default/files/documents/2019-12/draft-consultation-acm-guidelines-on-protection-of-online-consumer-boundaries-of-online-persuasion_0.pdf> accessed 18 August 2023; BEUC, 'Dark patterns and the EU consumer law acquis' (9 February 2022) <https://www.beuc.eu/sites/default/files/publications/beuc-x-2022-013_dark_patterns_paper.pdf> accessed 16 December 2022; European Data Protection Board (EDPB), 'Guidelines 3/2022 on Dark Patterns in social media platform interfaces: how to recognize and avoid them' (21 March 2022) <https://edpb.europa.eu/our-work-tools/documents/public-consultations/2022/guidelines-32022-dark-patterns-social-media_en> accessed 16 December 2022. Competition law discussion: OECD (n 3); See for US perspective: Federal Trade Commission (FTC), 'Bringing dark patterns to light. Staff report' (September 2022) <https://www.ftc.gov/system/files/ftc_gov/pdf/P214800%20Dark%20Patterns%20Report%209.14.2022%20-%20FINAL.pdf> accessed 16 December 2022; Day and Stemler (n 93).

¹⁹¹ For example, dark patterns may negatively affect data subject's and consumer's rights, respectively. See: Mark Leiser, "Dark Patterns": a case for regulatory pluralism' (16 July 2020) <<https://doi.org/10.31228/osf.io/ea5n2>> accessed 14 December 2022.

a large-scale, systemic manner may create opportunities for firms to distort demand side of the downstream market(s).

In assessing hypernudging by VAs as a potential vehicle for self-preferencing that could lead to foreclosure of competitors, one can draw some lessons from the *Google Shopping* judgement. At its core, the problematic consumer steering in *Google Shopping* concerned framing of consumers' options. As demonstrated by the Commission's behavioural studies, prominent placing of Google's comparison-shopping services on the search engine results pages was effective because consumers were inclined to "paddle the path of least resistance" and click on the first results.¹⁹² This framing was applied to consumers uniformly, meaning that every consumer making a query on Google Search would receive Google's comparison shopping services recommendation at a specific prominently placed area on the search engine results page. The recommendation placing, therefore, would not account for different consumers' preferences and inclinations.

Hypernudging, on the other hand, is well suited to address consumer heterogeneity.¹⁹³ By engaging in hypernudging, market actors can harness voice UI affordances to exploit consumer's vulnerabilities in a dynamically personalised manner. In addition, hypernudging mechanism allows presenting consumer with multiple (behavioural) interventions, at different times, through different intra-platform or inter-platform channels, which assessed individually may not be indicative of problematic behaviour.¹⁹⁴ For instance, when a VA is asked to recommend a specific product, a consumer may have purposely been exposed to VA's suggested brand or model in the respective platform ecosystem prior, be it through an ad, ranking of items on a marketplace or video-content. Having vast amounts of consumer data leading VA providers are well-positioned to identify where in the purchasing funnel the consumer is and when, as well as how, they should be gently pushed to move further towards a purchase.¹⁹⁵ This multidimensionality perspective of hypernudging is particularly challenging in terms of observability and inferring causality, necessitating novel detection methods and techniques to be placed on the future research agenda.¹⁹⁶

¹⁹² *Google Search (Shopping)* (n 7), paras 375 and 460.

¹⁹³ Mills (n 73).

¹⁹⁴ Morozovaite (n 3)

¹⁹⁵ Morozovaite (n 76), 133.

¹⁹⁶ Detecting even digital nudging practices, such as dark patterns, is a challenging task for enforcers. Personalized dark patterns and taking a step further – hypernudging – are even more difficult to detect and enforce against by regulatory authorities. See: Thun Htut Soe, Cristiana T Santos, and Marija Slavkovic, 'Automated detection of dark patterns in cookie banners: how to do it poorly and why it is hard to do it any other way' (2022) arXiv preprint arXiv:2204.11836.

Google Shopping is one, among other, cases which has shown that behavioural evidence is becoming utilised in competition law enforcement. In the world where behavioural insights can and are used to exploit consumer vulnerabilities to strategically influence their behaviour in a large-scale manner, taking stock of the relevant empirical behavioural analyses is valuable in supplementing enforcement, and does not as such necessitate replacing of pre-existing neo-classical economics theories and tools that guided competition law so far.¹⁹⁷ The growing concern over using consumers' cognitive biases and emotional trigger points for anticompetitive purposes has also been corroborated by the reports on digital competition.¹⁹⁸

As a result, in an increasingly consumer-centric digital markets, competition authorities can no longer ignore the impact of business practices, such as hypernudging, that primarily target (individual) consumer experience as a means to foreclose competitors.

In addition, there are some key differences between the nature of voice-based services and general search market analysed in *Google Shopping*, which seem to point to wider range of opportunities to engage in differential treatment between consumers and business customers in the case of the former. In the context of VAs, it is important to note that the business models are yet to fully crystallise as the companies are still finding their way in monetising voice services. The reporting in November 2022 signalled that leading VAs providers have lost revenues, are scaling back on different voice services and are reshaping their strategies.¹⁹⁹ For example, Google is sunsetting Conversational Actions, which allowed third-party developers to build a voice-only service for Google Assistant.²⁰⁰ Instead, the focus is shifted to App Actions on Android, which allows giving voice commands to Android Apps, such as booking a rideshare or

¹⁹⁷ OECD refers to this as a “gap-filling function” of empirical behavioral analyses. See: OECD, ‘Summary Record of the Discussion on Behavioural Economics’ (2012) 6 <[https://one-oecd-org-proxy.library.uu.nl/document/DAF/COMP/M\(2012\)2/ANN5/FINAL/en/pdf](https://one-oecd-org-proxy.library.uu.nl/document/DAF/COMP/M(2012)2/ANN5/FINAL/en/pdf)> accessed 1 June 2023; see on digital consumer vulnerability: Natali Helberger and others, ‘Choice Architectures in the Digital Economy: Towards a New Understanding of Digital Vulnerability’ (2022) 45(2) *Journal of Consumer Policy* 175.

¹⁹⁸ George J Stigler Center for the Study of the Economy and the State and the University of Chicago Booth School of Business, ‘Committee for the Study of Digital Platforms Market Structure and Antitrust Subcommittee Report’ (1 July 2019) <<https://research.chicagobooth.edu/-/media/research/stigler/pdfs/market-structure-report.pdf?la=en&hash=E08C7C9AA7367F2D612DE24F814074BA-43CAED8C>> accessed 12 December 2022; ACCC (n 49).

¹⁹⁹ ‘Okay Google, ‘What’s the Future of Smart Speaker Applications’ (*Action.ai*, 4 November 2022) <<https://action.ai/ok-google-whats-the-future-of-smart-speaker-applications/>> accessed 16 December 2022; Parmy Olson, ‘Alexa, when will you start make money?’ (*Washington Post*, 2022) <https://www.washingtonpost.com/business/alexa-will-youever-make-money/2022/11/22/53caa54c-6a82-11ed-8619-0b92f0565592_story.html> accessed 16 December 2022.

²⁰⁰ Derrek Lee, ‘Google to sunset Assistant’s Conversational Actions as focus shifts to App Actions on Android’ (*androidcentral*, 14 June 2022) <<https://www.androidcentral.com/apps-software/google-shutting-down-conversational-actions>> accessed 16 December 2022.

a table at a restaurant. The move seems to have realigned the incentives for developers to support Google's ecosystem as a whole.

It appears that the industry's development is moving towards VAs becoming a mode of engagement with digital products and services, voice being visualised a layer on top of them, rather than the assistance service being its own destination.²⁰¹ As the reach of VAs extends beyond a specific business line within the respective multi-product and multi-actor ecosystem that the VA is operating in, ensuring the adherence to the general principle of equal treatment is paramount.²⁰² Therefore, when considering the exclusionary potential of specific VAs' practices, the platform ecosystem perspective becomes particularly important. This observation further feeds into the discussion on the relevant market definition in digital markets, as the current tools do not adequately grasp the issues related to multi-sided markets, zero-price services and platform ecosystems.²⁰³

5. Conclusion

The ongoing shift towards voice-based engagement with digital products and services is currently led by a handful of big technology companies that have also dominated the previous UI shifts. This article showcased why VAs by leading providers are well-positioned to engage in hypernudging - dynamically personalised steering – of consumers towards specific market outcomes, such as purchasing decisions, and to seamlessly shape their preferences in favour of platforms' economic imperatives. In such circumstances, hypernudging by VAs may be considered as a vehicle for engaging in anticompetitive self-preferencing that falls under article 102 TFEU.

The combination of hypernudging and voice-based services paints a picture of complexity, extent of which competition authorities have not dealt with before. This article highlighted the overlooked connections between direct consumer influencing and concomitantly direct consumer harm, and exclusionary effects, specifically when firms engage in self-preferencing behaviour by systemically diverting consumer attention towards favoured products or services. Hypernudging by VAs provides a powerful depiction of more advanced and novel ways for firms to engage in self-

²⁰¹ Eric Hal Schwartz, 'Google Assistant Actions (Voice Apps) to Sunset, Focus Shifts to Android Apps' (*voicebot.at*, 13 June 2022) <<https://voicebot.at/2022/06/13/google-assistant-actions-voice-apps-to-sunset-focus-shifts-to-android-apps/>> accessed 16 December 2022; Simone Natale and Henry Cooke, 'Browsing with Alexa: Interrogating the impact of voice assistants as web interfaces' (2021) 43(6) *Media, Culture & Society* 1000.

²⁰² Amelia Fletcher, 'Digital competition policy: are ecosystems different?' (2020) 13 DAF/Comp/Wd/96, 2.

²⁰³ Crémer, de Montjoye and Schweitzer (n 49), 45-48; Subcommittee on Antitrust, Commercial and Administrative Law (n 53); Eben and Robertson (n 52); Jacobides and Lianos (n 28), 1204-1206.

preferencing behaviour and points to the potential evolution of self-preferencing theory of harm, which was only recently confirmed in the *Google Shopping* judgement.

The voice-based services are still at early stages and the policymakers are in a favourable position to shape this industry. Recent regulatory initiatives, including the DMA and the proposal for the European Data Act, are important contributions in fostering the contestability of general-purpose VAs market. While the impact of (upcoming) regulations is uncertain, it is a step in a positive direction since policymakers are actively dealing with identified concerns in this market. Since from the business perspective, VAs are developing to become a mode of engagement with digital products and services, instead of providing core platform service in its own right, there is a risk that the (proposed) legislation will focus on the former, more limited, perspective of the VAs market. Therefore, in the context of hypernudging by VAs, to grasp the full potential for exclusionary behaviour, it is imperative to account for the respective platform ecosystem the VA is operating in, as the VAs have a reach for strengthening business lines across that platform ecosystem as a whole.



Chapter 6

Exploring the Nexus between European Competition Law and Democratic Society: A Case of Political Microtargeting

Viktorija Morozovaite and Anna Gerbrandy, 'Exploring the nexus between European competition law and democratic society: a case of political microtargeting' (2023, pending decision in an international peer-reviewed journal)

The nexus between European competition law and democracy has been widely researched. Against the background of the ongoing digital transition and the power of big technology companies, this contribution aims to advance this debate by focusing on a specific example of political microtargeting with effects on the public sphere. The argument is developed by showcasing that the role of big technology companies in political microtargeting processes extends beyond passive facilitators and highlighting that by following financial incentives and treating citizens as consumers they, in effect, reduce incommensurable democratic values to fit economic metrics. While recognising that European competition law is primarily focused on curbing negative manifestations of market power and protecting consumer welfare, the composite power of big technology companies may require a careful re-assessment of its bounds.

1. Introduction

Digitalisation of markets and the emergence of novel data-driven business models have transformed not only the economic domain, but also the development of the digital public sphere.¹ By the same token, it led to “democratic deficits”, such as the spread of misinformation and fake news, filter bubbles, unjustified censorship, and bias in the democratic discourses.² Central to these developments is the role of big technology companies, which have amassed significant power in shaping societal and political structures.

This contribution focuses on examining political microtargeting processes, a topic which has gained prominence since the Cambridge Analytica revelations in 2018. While political microtargeting and its effects have been amply studied in the literature,³ this article deviates from existing research by exploring whether the negative effects of political microtargeting, as facilitated by big technology companies, can and should be addressed by European competition law. The nexus between competition law and democracy is not a novel topic, with its examination often taking a meta-level approach.⁴ This contribution moves a step beyond the abstract reasoning by unravelling this nexus in the context of an example of political microtargeting. It is grounded in the normative position that in the context of EU’s constitutional set up, the economy and society function within the framework of an open and democratic society, based on the rule of law, committed to safeguarding civil liberties and public values. While

¹ José van Dijk, Thomas Poell and Martijn de Waal, *The Platform Society: Public Values in a Connective World* (Oxford University Press 2018).

² Viktoria HSE Robertson, ‘Antitrust, Big Tech, and Democracy: A Research Agenda’ (2022) 67(2) *The Antitrust Bulletin* 259, 279.

³ Among others, see: Licia Cianci and Davide Zecca, ‘Polluting the political discourse: what remedies to political microtargeting and disinformation in the European constitutional framework?’ (2023) *European Journal of Comparative Law and Governance* 1; Brahim Zarouali and others, ‘Using a personality-profiling algorithm to investigate political microtargeting: assessing the persuasion effects of personality-tailored ads on social media’ (2022) 49(8) *Communication research* 1066; Tom Dobber, Ronan Ó Fathaigh and Frederik Zuiderveen Borgesius, ‘The regulation of online political microtargeting in Europe’ (2019) 8(4) *Internet Policy Review* 1; Frederik Zuiderveen Borgesius and others, ‘Online political microtargeting: promises and threats for democracy’ (2018) 14(1) *Utrecht Law Review* 82; Daniel Kreiss, ‘Micro-targeting, the quantified persuasion’ (2017) 6(4) *Internet Policy Review* 1.

⁴ Robertson (n 2); Anna Gerbrandy, ‘Rethinking competition law within the European economic constitution’ (2019) 57(1) *Journal of Common Market Studies* 127; Spencer Waller Weber, ‘Antitrust and Democracy’ (2018) 46 *Florida State University Review* 807; Conor Talbot, ‘Ordoliberalism and balancing competition goals in the development of the European Union’ (2016) 61(2) *Antitrust Bulletin* 264; Elias Deutscher and Stavros Makris, ‘Exploring the Ordoliberal paradigm: the competition-democracy nexus’ (2016) 11 *Competition Law Review* 181; Giuliano Amato, *Antitrust and the bounds of power: the dilemma of liberal democracy in the history of the market* (Bloomsbury Publishing 1997).

democracies come in different forms, an open public discourse, and the free exchange of thoughts in the marketplace of ideas, are its indispensable features.⁵

The focus is placed on the role of big technology companies, specifically Google and Meta, for three reasons.⁶ Firstly, the development and dynamics of the digital economy are led by these companies and their economic imperatives.⁷ That has spill-over effects into the political, social and personal domains.⁸ While political microtargeting involves multiple actors, big technology companies serve as both the source (of user data) and the digital advertising infrastructure (required for voter targeting).⁹ Secondly, the impact of microtargeting is amplified by the continuous reach of big technology companies: political messages can simultaneously be directed at a large user base, while adjusting to specific individual or group context.¹⁰ Finally, since big technology companies have amassed significant market power, built upon their data power, European competition law, at least in theory, is a relevant legal instrument in addressing harmful manifestations of this power.¹¹

It is noteworthy that European competition law acts primarily by curbing the negative effects of *market power*, felt in the market sphere - on consumer welfare, consumer choice, or the market process - and is not aimed at addressing harms to democratic processes. A formidable example, however, of how the dynamics and financial incentives that characterise digital markets create *enhanced* opportunities to influence voters' decisions is the Cambridge Analytica case, in which detailed psychographic

⁵ Judit Bayer, 'Double harm to voters: data-driven micro-targeting and democratic public discourse' (2020) 9 *Internet Policy Review* 1; Mark Bovens and Marcus Düwell (eds), *The Open Society and its Future - Think Paper Series #1* (Utrecht University, 2020) <<https://www.uu.nl/sites/default/files/IOS%20Think%20Paper%20Series%20%231.pdf>> accessed 10 August 2023.

⁶ It is important to note that while political advertising and targeting on these platforms may be limited, especially in Europe, by legal (e.g., General Data Protection Regulation) and contextual restrictions, "users provide a great deal of data on social media that can be used to target them despite" them. See: Johanna Schäwel, Regine Frener and Sabine Trepte, 'Political Microtargeting and Online Privacy: A Theoretical Approach to Understanding Users' Privacy Behaviors' (2021) 9(4) *Media Communication* 158, 160.

⁷ Van Dijck, Poell and de Waal (n 1).

⁸ Anna Gerbrandy and Pauline Phoa, 'The power of big tech corporations as Modern Bigness' in Rutger Claassen (ed.) *Wealth and Power* (Routledge 2022).

⁹ Australian Competition and Consumer Commission (ACCC), 'Digital platforms inquiry: Final report' (Canberra: Australian Competition and Consumer Commission, 26 July 2019) 119 <<https://www.accc.gov.au/about-us/publications/digital-platforms-inquiry-final-report>> accessed 10 August 2023; Competition and Markets Authority (CMA), *Online platforms and digital advertising: Market study final report* (2020); Viktorija Morozovaite, 'Two sides of the digital advertising coin: putting hypernudging into perspective' (2021) 5(2) *Market and Competition Law Review* 105, 145.

¹⁰ Morozovaite (n 9), 107.

¹¹ Gerbrandy and Phoa (n 8); José van Dijck, 'Seeing the forest for the trees: Visualizing platformization and its governance' (2021) 23(9) *New Media and Society* 2801, 2819. On the role of data in the digital economy, see: Shoshana Zuboff, *The age of surveillance capitalism: the fight for a human future at the new frontier of power* (Profile Books 2019).

data profiles were used to nudge citizens toward political preferences.¹² As a result, this article builds upon and expands the ongoing debate on whether and how European competition law can and should address the power of big technology companies.¹³

The first part of this article proceeds by examining what political microtargeting entails, including an overview of different market actors present in the economic value chain for these processes to occur. Against this background, the role big technology companies play in the delivery of political microtargeting is assessed. Considering the power of big technology companies in shaping economic and societal structures, it is highlighted that by following economic logic and treating citizens as consumers, these companies in effect reduce incommensurable democratic values to fit economic metrics. The second part of this article sketches European competition law's connection to democratic values, its functioning, and its limitations, to test and reconsider the boundaries of European competition law by examining its possible responses to the challenges raised by political microtargeting.

2. Political Microtargeting and Big Technology Companies

In democratic societies, political communication, especially campaigning, plays a key role in informing voters of different electoral parties and candidates, and promoting their agenda. The goal is to persuade and mobilise citizens to cast their vote for the represented candidate/party.¹⁴ The digital transition created new ways for people to consume (political) information,¹⁵ leading to data-driven political campaigning. The focus of this article is political microtargeting, which is a specific aspect of political campaigning, thereby excluding general political communication in public, on legacy

¹² Another example of how digital platforms influence political preferences is the consequence of the change of the Facebook's algorithm, which apparently led to political parties in Europe to change how they communicate their political messages (more extreme, harder attacks on other political parties). At the time of writing not much more is known and though the algorithmic change can be construed as a nudge – not necessarily of the voter, but of political parties – it is not a form of political microtargeting described in this article. 'the facebook files: A Wallstreet Journal investigation' (*The Wall Street Journal*, 1 October 2021) <<https://www.wsj.com/articles/the-facebook-files-11631713039>> accessed 10 August 2023.

¹³ Gerbrandy and Phoa (n 8); Ariel Ezrachi and Maurice E Stucke, *Virtual competition: The Promise and Perils of the Algorithm-Driven Economy* (Harvard University Press 2016); Nicolas Petit, *Big tech and the digital economy: The monopolopoly scenario* (Oxford University Press 2020); Björn Lundqvist and Michal S Gal, *Competition Law for the Digital Economy* (Edward Elgar Publishing 2019); Martin Moore and Damian Tambini (eds), *Regulating Big Tech: Policy Responses to Digital Dominance* (Oxford University Press 2021).

¹⁴ Elizabeth Suhay, Bernard Grofman and Alexander H Trechsel, *The Oxford handbook of electoral persuasion* (Oxford University Press 2020); Felix M Simon, "We power democracy": Exploring the promises of the political data analytics industry' (2019) 35(3) *Information Society* 158, 159.

¹⁵ Tom Dobber and others, 'Two crates of beer and 40 pizzas: the adoption of innovative political behavioral targeting techniques' (2017) 6(4) *Internet Policy Review* 1, 3.

media or social media platforms. The methods employed by political consulting firms reflect how the value is created from users' data: "from acquisition (asset) to analysis (intelligence), to application (influence)".¹⁶ This section will explain what political microtargeting entails, delve into the details of the Cambridge Analytica case as its example, and highlight the role of big technology companies, with specific focus on Google and Meta, in the functioning of this market.

2.1. The Rise of Political Microtargeting

What is 'political' is not a uniformly accepted concept even across the EU's Member States. However, when it comes to political advertising – a notion closely related to political microtargeting – guidance has been provided by the European Court of Human Rights: political advertising encompasses all paid advertising on matters of broad general interest and falling "outside the regular commercial context inciting the public to purchase a particular product".¹⁷ A recent European legislative proposal on the transparency and targeting of political advertising, broadly defined the concept as:

"[T]he preparation, placement, promotion, publication or dissemination, by any means of a message by, for or on behalf of a political actor, unless it is of a purely private or a purely commercial nature; or which is liable to influence the outcome of an election or referendum, a legislative or regulatory process or voting behavior".¹⁸

Political microtargeting describes a narrower type of political advertising practice, which refers to "creating finely honed messages targeted at narrow categories of voters'

¹⁶ Tactical Tech, 'Personal data: Political persuasion. Inside the influence industry. How it works' (2019) <https://cdn.ttc.io/s/tacticaltech.org/Personal-Data-Political-Persuasion-How-it-works_print-friendly.pdf> accessed 7 August 2023; International Institute for Democracy and Electoral Assistance, 'Webinar Series: Online Political Advertising and Microtargeting: the Latest Legal, Ethical, Political and Technological Evolutions' (Meeting Report, 15 and 18 June 2020) <https://www.idea.int/sites/default/files/reference_docs/report-%20webinar-%20series-on-political-advertising-june-2020.pdf> accessed 10 August 2023

¹⁷ The European Regulators Group for Audiovisual Media Services, 'Notions of Misinformation and Related Concepts' (ERGA Report, 2021) 43. It is noteworthy that what is "[p]olitical could be understood in the narrow sense of the word as referring to communications by political parties, in particular during election time. In the narrowest sense, this would mean that political advertising amounts to the promotion of candidates for elections. In the broader sense, political advertising consists of paid political communications on issues of public concern, for instance through what are also called 'issue ads'". Joris van Hoboken and others, 'The legal framework on the dissemination of disinformation through Internet services and the regulation of political advertising' (University of Amsterdam, IViR, A report for the Ministry of the Interior and Kingdom Relations, December 2019) 27.

¹⁸ Commission, 'Proposal for a Regulation of the European Parliament and of the Council on the transparency and targeting of political advertising' COM/2021/731 final, article 2(2). See on critique of the definition, and the overview of the definition more generally: Max Z van Drunen, Natali Helberger and Ronan Ó Fathaigh, 'The beginning of the EU political advertising law' (2022) 30(2) *International Journal of Law and Information Technology* 181, 199.

based on data analysis garnered from individuals' demographic characteristics and consumer and lifestyle habits".¹⁹ At the heart of political microtargeting lies the use of data and analytics to design, predict the impact of, and convey tailored messages to (groups of) individual voters.²⁰

The political consulting industry followed suit of the commercial advertising sector in harnessing sophisticated psychological techniques and technological affordances "to communicate and build a relationship with prospective voter".²¹ Psychometric profiling is one of such techniques, which refers to the process of inferring and measuring people's personality traits.²² The possibilities to analyse vast quantities of personal data create opportunities to profile potential voters without their explicit input. Researchers claim that personal characteristics can be inferred from analysing how a person uses Meta's social media platform Facebook: for instance, a user liking a specific artist's page suggests high levels of openness.²³ By combining different pieces of data about, among others, a user's personality traits, sexual orientation, race and socio-economic status, it is now possible to construct the so-called voter's "virtual social identity".²⁴ Extensive reliance on voter-data acquisition and its analysis for political purposes represents a shift in political campaigning, from the focus on general voter characteristics to more granular targeting based on user data analysis which allows adjusting the content, quality, means of delivery and speed of communication in real

¹⁹ Borgesius and others (n 3), 83.

²⁰ Ibid, 82-96.

²¹ Balázs Bodó, Natali Helberger and Claes H de Vreese, 'Political micro-targeting: a Manchurian candidate or just a dark horse?' (2017) 6(4) *Internet Policy Review* 1, 3; Bayer (n 5), 17.

²² Tactical Tech (n 16).

²³ Ibid; Michal Kosinski, David Stillwell and Thore Graepel, 'Private traits and attributes are predictable from digital records of human behavior' (2013) 110(15) *Proceedings of the National Academy of Sciences* 5802, 5805.

²⁴ Islam M Hegazy, 'The effect of political neuromarketing 2.0 on election outcomes: The case of Trump's presidential campaign 2016' (2019) *Review of Economics and Political Science* 235, 237. An important stride in research has been made in relation to voice profiling and opportunities to deduce individual's characteristics from their voice. This is a particularly salient discussion in relation to digital assistants, see: Joseph Turow, *The Voice Catchers: How Marketers Listen in to Exploit your Feelings, your Privacy, and your Wallet* (Yale University Press 2021); Rita Singh, *Profiling humans from their voice* (Springer 2019); Joseph Turow, 'Journalism and the Voice Intelligence Industry' (2021) 9(7) *Digital Journalism* 1000, 1006. Nevertheless, there is also a risk of such predicted profiles leading to harms: Hideyuki Matsumi and Daniel J Solove, 'The prediction society: algorithms and the problems of forecasting the future' (2023) <<https://ssrn.com/abstract=4453869>> accessed 10 August 2023.

time.²⁵ Ultimately, the mechanics of political microtargeting campaigns are aimed at influencing citizens by playing with their emotions, desires, and other internal triggers.

Political microtargeting is not a new phenomenon. In the US, it has been used since the 1990s, with its first limited nationwide application by the Republican party in the 2000 elections.²⁶ The 2012 presidential race represented a shift towards more extensive use, with both the Obama and Romney presidential campaigns adopting data-driven techniques that led to increased granularity in voter profiles.²⁷ However, it is only after the Cambridge Analytica scandal of spring 2018 that political microtargeting, and its dark side,²⁸ came to the spotlight from the perspective of the public and the policymakers.²⁹

As is well documented, Cambridge Analytica was a political consulting firm involved in the Leave.EU campaign in Britain and the 2016 Donald Trump's Presidential campaign.³⁰ The firm obtained data of 50 million Facebook users and used that data to target voters with precisely tailored political messages.³¹ In doing so, Cambridge Analytica measured individuals' Big Five personality traits (the so-called OCEAN

²⁵ Linda Risso, 'Harvesting Your Soul? Cambridge Analytica and Brexit, in Brexit means Brexit?' in Christa Jansohn (ed) *Brexit Means Brexit?* (Akademie der Wissenschaften und der Literatur 2017) 79. Political messages can be delivered via various means including mail, phone, canvassing, direct mail and social media, see: Bodó, Helberger and de Vreese (n 21), 3; Yilun Wang and Michal Kosinski, 'Deep neural networks are more accurate than humans at detecting sexual orientation from facial images' (2018) 114(2) *Journal of Personality and Social Psychology* 246, 257.

²⁶ Hegazy (n 24), 242.

²⁷ Ibid, 243.

²⁸ Christopher Wylie, *Mind*ck: Cambridge Analytica and the plot to break America* (Random House 2019); Brittany Kaiser, *Targeted: My inside story of Cambridge Analytica and how Trump, Brexit and Facebook broke democracy* (Harper Collins 2019).

²⁹ Information Commissioner's Office (ICO), 'Investigation into the use of data analytics in political campaigns' (A report to Parliament, 2018) <<https://ico.org.uk/media/action-weve-taken/2260271/investigation-into-the-use-of-data-analytics-in-political-campaigns-final-20181105.pdf>> accessed 10 August 2023; S.Hrg. 115-683 'Facebook, Social Media Privacy, and the Use and Abuse of Data' (4 October 2018) 115th Congress (2017-2018) <<https://www.congress.gov/event/115th-congress/senate-event/LC64510/text?s=1&r=59>> accessed 10 August 2023; European Parliament, 'Hearing on the Facebook/Cambridge Analytica case part 1' (2018) <<https://www.europarl.europa.eu/committees/en/hearing-on-the-facebook-cambridge-analyt/product-details/20180529CHE04141>> accessed 10 August 2023.

³⁰ Alex Hern, 'Cambridge Analytica did work for Leave.EU, emails confirm' (*The Guardian*, 30 July 2019) <<https://www.theguardian.com/uk-news/2019/jul/30/cambridge-analytica-did-work-for-leave-eu-emails-confirm>> accessed 10 August 2023; Paul Lewis and Paul Hilder, 'Leaked: Cambridge Analytica's blueprint for Trump victory' (*The Guardian*, 23 March 2018) <<https://www.theguardian.com/uk-news/2018/mar/23/leaked-cambridge-analyticas-blueprint-for-trump-victory>> accessed 10 August 2023.

³¹ 'The Cambridge Analytica files: a year-long investigation into Facebook, data and influencing elections in the digital age' (*The Guardian*, 18 March 2018) <<https://www.theguardian.com/news/series/cambridge-analytica-files>> accessed 2 June 2023> accessed 10 August 2023.

model) and turn built psychographic profiles.³² According to the whistle-blower Kaiser, the firm’s “database included data from Facebook, data vendors, and (in the USA) Cambridge Analytica’s client’s proprietary data that they had produced themselves and was not purchasable on the open market”.³³ This data was then used to feed the algorithms to infer and influence voting behaviour by delivering variations of messages by means and in moments the individual would be most receptive to them.³⁴

Cambridge Analytica’s practices, in principle, were an elevated version of long-standing political campaigning techniques that focus on influencing “the emotional citizen”.³⁵ While political beliefs have proven to be particularly difficult to displace, with people showing more scepticism towards attempts to persuade them, introducing big data and AI capabilities in the mix seems to allow obtaining a better understanding of what type of political messages specific (segments of) voters are most receptive to and what triggers them to take action.³⁶ Large-scale A/B testing plays an important role in refining and dynamically tailoring messages to specific audiences.³⁷ Emotional AI is another area of technological development that employs affective computing and AI techniques to learn and interact with human emotions.³⁸ The increasingly granular understanding of a voter, combined with unprecedented opportunities to reach them in moments of greatest susceptibility to influence, is what makes micro-targeting practices so formidable.³⁹ Nevertheless, the awareness about the prevalence of these

³² Robert R McCrae and Oliver P John, ‘An introduction to the five-factor model and its applications’ (1992) 60(2) *Journal of Personality* 175, 215.

³³ Vian Bakir, ‘Psychological Operations in Digital Political Campaigns: Assessing Cambridge Analytica’s Psychographic Profiling and Targeting’ (2020) 5 *Frontiers in Communication* 1, 7; Wylie (n 28). Note, technological possibilities to target voters are constantly evolving. For instance, political campaigns are taking advantage of commercial geo-spatial intelligence complex is being used to enhance mobile and geo-targeting strategies, see: Jeff Chester and Kathryn C Montgomery, ‘The digital commercialization of US politics — 2020 and beyond’ (2019) 8(4) *Internet Policy Review* 1, 5.

³⁴ Margaret Hu, ‘Cambridge Analytica’s black box’ (2020) 7(2) *Big Data & Society* 1, 2.

³⁵ Cengiz Erisen, *Political behavior and the emotional citizen: Participation and Reaction in Turkey* (Palgrave Macmillan 2018); Political microtargeting is now assumed widespread in Western democracies, see: Colin J Bennett and Jesse Gordon, ‘Understanding the “Micro” in Micro-Targeting: An Analysis of Facebook Digital Advertising in the 2019 Federal Canadian Election’ (2021) 46(3) *Canadian Journal of Communication* 431.

³⁶ Jessica Baldwin-Philippi, ‘Data campaigning: between empirics and assumptions’ (2019) 8(4) *Internet Policy Review* 1, 6.

³⁷ *Ibid.*, 11.

³⁸ Emotional AI Lab, ‘What is emotional AI?’ <<https://emotionalai.org/so-what-is-emotional-ai/>> accessed 10 August 2023.

³⁹ In the words of the Cambridge Analytica whistle-blower Christopher Wylie: “The difference now is that as a candidate... I can go and whisper into every single voter’s ear and I can whisper something different to each person. I don’t even necessarily need to appear as if I’m a candidate. I can look like a news site, a friend, a random person, a professor”, see: ‘Political parties and what they know: Q&A with Chris Wylie & Wendy Mesley on the Weekly’ (*CBS News*, 15 September 2019) <<https://www.cbc.ca/news/politics/chris-wylie-and-wendy-mesley-1.5284546>> accessed 10 August 2023.

techniques in practice is limited due to the lack of observability of the methods and systems that shape public discourse.⁴⁰ The call for algorithmic transparency is arguably the first step in addressing this gap in understanding.⁴¹

The evidence on the effectiveness of political micro-targeting in steering voters' behaviour is inconclusive.⁴² This can partially be attributed to the fact that these practices are challenging to detect, and therefore assess, as ads are delivered to granular segments of (or even individual) users and it is uncertain who was exposed to which content and when.⁴³ Ad archives, which are "systems for automated public disclosure of ads"⁴⁴ sold on the specific platforms, have been introduced to increase accountability in regard to online political advertising.⁴⁵ However, while providing a promising step towards more transparency, ad archives have been criticised for failing to provide detailed information to meaningfully capture the specifics of targeted advertising.⁴⁶

Furthermore, several studies found that the persuasive impact of political microtargeting is very limited and occur in rare circumstances when, for instance, campaign takes advantage of an unusually unpopular opinion by opposing candidate.⁴⁷ More generally, campaign practitioners find it difficult to influence people and change their political opinions.⁴⁸ Assessing the impact of political microtargeting is further complicated by the fact that there is no counterfactual as to how the election outcomes would have gone without microtargeting taking place.

Finally, the effectiveness of microtargeting may be hindered by the limitations to the predictive power of data collected from social media platforms regarding users' OCEAN personality traits.⁴⁹ However, the findings also confirm that predictive accuracy improves when analyses include more and different types of data. Thus,

⁴⁰ Bernhard Rieder and Jeanette Hofmann, 'Towards platform observability'(2020) 9(4) *Internet Policy Review* 1, 2.

⁴¹ Paddy Leerssen and others, 'Platform ad archives: Promises and Pitfalls' (2018) 8(4) *Internet Policy Review* 1. On the ideal of transparency and its limitations see: Mike Ananny and Kate Crawford, 'Seeing without knowing: Limitations of the transparency ideal and its application to algorithmic accountability' (2018) 20(3) *new media & society* 973.

⁴² Baldwin-Philippi (n 36), 6.

⁴³ Nick Anstead, 'Data and Election Campaigning' (2018) 9(2) *Political Insight* 32, 34.

⁴⁴ Leerssen and others (n 41), 2.

⁴⁵ While initially a result of self- and co-regulatory measures, with the enactment of the DSA, very large online platforms and very large online search engines are now obliged to create ad repositories. Regulation (EU) 2022/2065 of the European Parliament and of the Council of 19 October 2022 on a Single Market For Digital Services and amending Directive 2000/31/EC (Digital Services Act) [2022] OJ L 277/1, article 39.

⁴⁶ Ibid.

⁴⁷ Mathieu Lavigne, 'Strengthening ties: The influence of microtargeting on partisan attitudes and the vote' (2021) 27(5) *Party Politics* 965, 968.

⁴⁸ Adrian Furnham and Mark Fenton-O'Creevy, 'Personality and political orientation' (2018) 129 *Personality and Individual Differences* 88, 88-91.

⁴⁹ Ibid, 88.

the greater ability to gather and combine different datasets is expected to lead to more accurate targeting.⁵⁰ Lack of accuracy in profiling voters can on its own lead to harmful outcomes, since it may result in political microtargeting segments that omit or downplay important political aspects of a community and reinforce stratification.⁵¹

Nevertheless, research into people's political behaviour can be used to assess the likelihood of microtargeting leading to desired outcomes. Studies into emotion as an element of political behaviour have shown that the effectiveness of some political messages is dependent on the emotions evoked. Political ads with a positive message can motivate people towards in-group favouritism and reinforce existing loyalties. In contrast, negative political messages have shown to increase partisanship and out-group antagonism.⁵² Thus, having a granular voter profile enhances the opportunities to tailor messages to invoke desired emotions and, in turn, behaviour. Moreover, microtargeting helps to improve voter turnout,⁵³ (though to achieve this, publicly available demographic information can already be sufficient).⁵⁴ Finally, in a competitive election – for example, in two party systems - the impact of political preferences and decisions of even a small fraction of citizens could prove critical for winning.⁵⁵ Therefore, focusing the political micro-targeting efforts on persuadable voters may prove sufficient to influence an outcome. With evolving technology and granularity of targeting, the risks relating to steering voters towards political preferences are expected to remain.

It also is noteworthy that while political microtargeting campaigns have been less prevalent in Europe than in the US, the practices are increasingly emulated by some

⁵⁰ Iaroslav Omelianenko, 'Applying Deep Machine Learning for psycho-demographic profiling of Internet users using OCEAN model of personality' (2017) arXiv preprint arXiv:1703.06914, 15.

⁵¹ Kelley Cottler, 'Selling Political Data: How Political Ad Tech Firms's Discourses Legitimate Microtargeting?' (17th International Conference on Information, iConference 2022, virtual event, 28 February 2022) 197 <https://dl.acm.org/doi/abs/10.1007/978-3-030-96957-8_18> accessed 20 August 2023.

⁵² German Alvarez, Jaewon Choi and Sharon Strover, 'Good News, Bad News: A Sentiment Analysis of the 2016 Election Russian Facebook Ads' (2020) *Good Systems Network Digest* 3027, 3031; Patrick R Miller, 'The emotional citizen: Emotion as a function of political sophistication' (2011) 32(4) *Political Psychology* 575, 575; Lavigne (n 47), 970.

⁵³ Baldwin-Philippi (n 36), 11. Note, even non-targeted universal nudges such as Facebook's 'I Voted' button used on the 2010 US Congressional elections increased turnout by 340,000 across the country. See: Anstead (n 43), 34.

⁵⁴ Katharine Dommert, 'Data-driven political campaigns in practice: understanding and regulating diverse data-driven campaigns' (2019) 8(4) *Internet Policy Review* 1, 2; Eitan D Hersh, *Hacking the Electorate: How Campaigns Perceive Voters* (Cambridge University Press 2015).

⁵⁵ Jacquelyne Burkell and Priscilla M Regan, 'Voter preferences, voter manipulation, voter analytics: policy options for less surveillance and more autonomy' (2019) 8(4) *Internet Policy Review* 1, 2. For instance, it was said that the Brexit Referendum result in the end came down to around 600,000 people. See: Vian Bakir and Andrew McStay, *Optimising emotions, incubating falsehoods: How to protect the global civic body from disinformation and misinformation* (Palgrave Macmillan 2022) 154.

political parties in Western Europe and the UK.⁵⁶ In the EU, the potential for abuse identified by scandals such as Cambridge Analytica has fuelled a push for closer regulatory scrutiny.⁵⁷ The Commission's European Democracy Action Plan, for example, highlights the need for more transparency in political advertising and communication as well as the need for more obligations and accountability for digital platforms, because it is their systems that predominantly facilitate citizens' access to the relevant information.⁵⁸ As will be discussed in the next section, the examination of the role of digital platforms in political microtargeting processes, in particular big technology companies, may point towards the need for even greater scrutiny.

2.2. The Role of Big Technology Companies in Political Microtargeting

The scene for political microtargeting is comprised of an intricately connected web of actors, and the understanding of their role in these processes is currently limited.⁵⁹ Big technology companies, such as Meta and Google, are instrumental in the delivery of microtargeted messages. Due to their control of crucial information flows, facilitating deliberation and participation in democratic culture, these companies have been considered to hold Internet information gatekeeper status.⁶⁰ They operate in multi-sided markets, with users usually not having to pay a monetary price for information services. Instead, their time, attention and, ultimately, data are monetised on the advertiser-side of the business.⁶¹ Big technology companies are unmatched in their ability to gather and combine (vast) user-data across the different business lines that comprise their

⁵⁶ Greater prevalence of political microtargeting in the US can be attributed to the laxer privacy regulations and different funding rules for political campaigns. Borgesius and others, (n 3), 84; Dobber and others (n 15).

⁵⁷ Leerssen and others (n 41), 6.

⁵⁸ Commission, 'The European Action Plan on the European Democracy Plan' (Communication) COM (2020) 790 final; Stephan Lewandowsky and others, 'Technology and Democracy: Understanding the influence of online technologies on political behaviour and decision-making' (Publications Office of the European Union, Luxembourg, 2020); 'Joint Communication to the European Parliament and the Council EU Action Plan on Human Rights and Democracy 2020-2024' [2020] JOIN/2020/5 final.

⁵⁹ Dommert (n 54), 8.

⁶⁰ Emily Laidlaw, 'A framework for identifying Internet information gatekeepers' (2010) 24(3) *International Review of Law, Computers and Technology* 263, 263.

⁶¹ Jean-Charles Rochet and Jean Tirole, 'Platform competition in two-sided markets' (2003) 1(4) *Journal of the European Economic Association* 990, 1029; Mark Armstrong, 'Competition in two-sided markets' (2006) 37 *The RAND Journal of Economics* 668, 691.

respective platform ecosystems, as well as the ability to provide and control the means that allow advertisers to reach users.⁶²

The argument that big technology companies play an integral part in political microtargeting practices is based on the premise that *user data* is central to the (effective) delivery of political micro-targeting. In this context, the data value chain contains three distinct layers: data acquisition, data analysis and data application.⁶³ Each layer encompasses different market actors, providing different services, contributing towards political campaigning goals. Meta and Google (and other leading technology companies) have a strong presence in each of these layers.⁶⁴ Despite their importance in the data value chain and, in turn, data-driven political campaigns, big technology companies are perceived as *facilitators* that provide the means to influence voters on a large scale: they offer a range of microtargeting tools and services that can be utilised for political purposes. However, zooming-in on the several components which smaller tech-companies do not possess allows demonstrating a more active part that big technology companies undertake in shaping political communications.⁶⁵

Firstly, consider data acquisition that fuels political microtargeting practices. Data is an asset that can be acquired from *inter alia* traditional data brokers, internet platforms or political data consultants. Political campaigns combine different data sets, including commercial data as well data from political party and memberships, polls, and surveys, or – in jurisdictions where this is a prerequisite for voting – publicly available voter registration records.⁶⁶ To illustrate the importance of the richness of datasets in inferring voters' personality traits, consider the research which showed that applying deep machine learning (ML) for psycho-demographic profiling of users lead to weak correlations between most of OCEAN psychometric scores of individuals and collected Facebook likes associated with them (neither simple nor advanced ML algorithms could

⁶² “The means” in this context refers to user-facing services, such as social media networks. Also: “[t]oday’s ecosystem orchestrators also leverage the data that are generated by their ecosystem to target individual customers and customize their offerings, as well as learn what works best and yields most with the help of AI and constant A/B testing (Athey and Luca, 2019), threatening to give them an insurmountable advantage.” See: Michael G Jacobides and Ioannis Lianos, ‘Ecosystems and competition law in theory and practice’ (2021) 30(5) *Industrial and Corporate Change* 1199, 1202.

⁶³ Tactical Tech (n 16).

⁶⁴ Morozovaite (n 9), 105; CMA (n 9).

⁶⁵ On analysis of big technology companies’ role in the US Presidential Election in 2016, see: Daniel Kreiss and Shannon McGregor, ‘Technology Firms Shape Political Communication: The Work of Microsoft, Facebook, Twitter, and Google With Campaigns During the 2016 U.S. Presidential Cycle’ (2018) 35(2) *Political Communication* 155, 177. On “opinion power” and ability to shape public discourse, see: Natali Helberger, ‘The Political Power of Platforms: How Current Attempts to Regulate Misinformation Amplify Opinion Power’ (2020) 8(6) *Digital Journalism* 842.

⁶⁶ Tactical Tech (n 16).

provide a strong prediction for all the traits).⁶⁷ However, the accuracy of inferences increased with more available datasets.⁶⁸ Big technology companies – also referred to as data-opolies⁶⁹ – possess unmatched degrees of user data, available in real-time, making the possibility of more accurate dynamic profiling formidable. While these companies do not sell users’ data to political campaigns, they are able to refine their digital advertising services whilst allowing political campaigns to indirectly utilise this data through testing campaigning messages and analysing their performance.⁷⁰

Secondly, reinforced by the richness of available user data, Meta and Google are able to offer the state-of-the-art advertising infrastructure and tools that enable advertisers to reach the right user-citizen (group), with the right message, by the right means, at the right time, as many times as needed to influence their political behaviour.⁷¹ For example, Meta’s advertising platform allows developers to build audiences similar to a manually selected audience (“Lookalike Audience”).⁷² As described by Alexandr Kogan, instead of modelling individual voters’ personality traits from the data, it would be much easier to take known details for people that accurately represent a particular personality trait and then use Meta’s tools to create a lookalike audience to reach the group of people that match the same personality trait as an original audience.⁷³ In this example, Meta’s data and ad tech infrastructure is crucial for facilitating micro-targeting. In fact, the digital advertising ecosystems of Meta and Google are considered inescapable: there is no ad (commercial or political one) that flies through the web without going through one of these companies’ services at some layer of the advertising value chain.⁷⁴ However, the safeguards against potential misuse of the advertising

⁶⁷ OCEAN model is traditionally based on results from people’s responses to a survey that probe into intimate parts of their life, see: International Personality Item Pool, ‘A Scientific Collaboratory for the Development of Advanced Measures of Personality and Other Individual Differences’ <<https://ipip.ori.org/>> accessed 10 August 2023.

⁶⁸ Omelianenko (n 50), 15; See also David Sumpter, *Outnumbered: from Facebook and Google to fake news and filter-bubbles—the algorithms that control our lives* (Bloomsbury Sigma 2018)

⁶⁹ Maurice E Stucke and Allen P Grunes, ‘Data-opolies’ (2017) University of Tennessee Legal Studies Research Paper No. 316, 1 <<https://ssrn.com/abstract=2927018>> accessed 10 August 2023.

⁷⁰ ‘Does Facebook sell my information’, Facebook Help Center <https://www.facebook.com/help/152637448140583/?helpref=uf_share> accessed 10 August 2023.

⁷¹ Morozovaite (n 9), 105.

⁷² ‘About Lookalike Audiences’, Meta Business Help Center <<https://www.facebook.com/business/help/164749007013531?id=401668390442328>> accessed 10 August 2023; Bakir (n 33), 10; Bennett and Gordon (n 35) 7.

⁷³ Rahul Rathi, ‘Effect of Cambridge Analytica’s Facebook ads on the 2016 US Presidential Election’ (*Towards Data Science*, 2019) <<https://towardsdatascience.com/effect-of-cambridge-analyticas-facebook-ads-on-the-2016-us-presidential-election-dacb5462155d>> accessed 20 August 2023.

⁷⁴ For an overview of the competitive landscape of digital advertising in Europe, see: European Commission, Directorate-General for Communications Networks, Content and Technology, ‘Study on the impact of recent developments in digital advertising on privacy, publishers and advertisers: final report’ (Publications Office of the European Union, 2023) 21-37 <<https://data.europa.eu/doi/10.2759/294673>> accessed 10 August 2023.

infrastructure and tools are limited; there is little understanding of how they are used in practice.⁷⁵

Thirdly, while political consulting firms, such as Cambridge Analytica, devise their campaigns and strategies, the extent to which big technology companies actively take part in shaping political communications is under-researched.⁷⁶ A widely criticised feature of Meta and Google's involvement in the US 2016 Presidential Election was embed-like consulting, where companies' employees provided strategic advice to campaigns about their products; consultants were part of partisan teams which worked with campaigns of the same political affiliation, in order to facilitate trust.⁷⁷ The empirical analysis of interviews with former US 2016 Presidential campaign staffers revealed that Meta and Google (as well as Microsoft and Twitter) "have developed organizational structures and staffing patterns that accord with the partisan nature of American politics [and] [...] go beyond promoting their services and facilitating advertising buys, actively shaping campaign communication through their close collaboration with political staffers".⁷⁸ This collaboration was meant to generate a mutually beneficial relationship: technology companies would reap a higher revenue due to greater engagement, and campaigns would receive better performing ads.⁷⁹ According to one report, the practice was not completely discontinued in 2020 election cycle.⁸⁰

Taking a step back for a broader picture of big technology companies' role in political microtargeting practices, one is starting to see the cracks in the narrative that they are merely passive facilitators of political discourse.⁸¹ A more active role can be uncovered

⁷⁵ Katherine Dommett and Sam Power, 'The political economy of Facebook advertising: Election spending, regulation and targeting online' (2019) 90(2) *The Political Quarterly* 257, 264. For instance, recent NATO STRATCOM COE study finds a significant difference among platforms in their ability and willingness to counter manipulation of their services. The action taken by major social media companies is perceived as insufficient. See: Rolf Fredheim and Sebastian Bay, 'Social Media Manipulation 2021/2022: Assessing the ability of social media companies to combat platform manipulation' (*NATO Strategic Communications Centre of Excellence*, 27 April 2022) <<https://stratcomcoe.org/publications/social-media-manipulation-20212022-assessing-the-ability-of-social-media-companies-to-combat-platform-manipulation/242>> accessed 10 August 2023.

⁷⁶ Helberger (n 65).

⁷⁷ Tech Transparency Project, 'Facebook, Google Still Offering 'Embed'-Like Consulting to Campaigns' (26 October 2020) <<https://www.techtransparencyproject.org/articles/facebook-google-still-offering-embed-like-consulting-campaigns>> accessed 10 August 2023; Kreiss and McGregor (n 65), 162.

⁷⁸ Kreiss and McGregor (n 65), 155

⁷⁹ Ibid.

⁸⁰ Tech Transparency Project (n 77).

⁸¹ Preston M Torbert, "'Because It is Wrong": An Essay on the Immorality and Illegality of the Online Service Contracts of Google and Facebook' (2021) 12 *Journal of Law, Technology & the Internet* 1, 59.

when considering the very logic that inform the functioning of the platform itself.⁸² The business models of most social media companies and search engines hinge on advertising. These platforms are designed to function as one-stop-shops for users, aiming to keep them engaged whilst utilising their attention by exposing them to ads.⁸³ As a result, companies' decisions on designing their algorithms, including the criteria for selecting (political) content for dissemination, follow economic imperatives – increasing the traffic rates and engagement on the website.⁸⁴ Since companies, such as Google and Meta, usually get rewarded when the user clicks on the ad, most click-able ads (relevant, but also emotional, shocking, radicalising) are likely to end up on the user's screen.⁸⁵ This may manifest in favouring false or misleading political campaign advertisements, which are shared the most and thus generate most advertising revenue.⁸⁶ Unsurprisingly, given that these companies are primarily accountable to the shareholders and not the public.⁸⁷

Understanding users' internal triggers is also an important part of the parcel of platforms monetising users' attention. Algorithmic systems are purposely designed to push forward the content that confirms and amplifies what users already think, believe and value.⁸⁸ Leaked documents confirm that big technology companies actively research emotional contagion,⁸⁹ users' emotional states,⁹⁰ and introduce features, such

⁸² Erik Longo, 'The risks of social media for democracy: a call for a new regulation' in Bart Custers and Eduard Fosch-Villaronga (eds) *Law and Artificial Intelligence: Regulating AI and Applying AI in Legal Practice* (Springer 2022) 180.

⁸³ *Ibid.*, 177.

⁸⁴ Kreiss and McGregor (n 65), 162; Eline Chivot, 'The new EU rulebook for online platforms: How to get it right, who will it impact and what else is needed?' (2021) 20(2) *European View* 121, 130.

⁸⁵ Note, relevancy is not always good, especially not in political information realm: can lead to filter bubbles. However, might also allow citizens to participate in the political debate on issues they care the most. See: Cass R Sunstein, *#Republic: Divided Democracy in the Age of Social Media* (Princeton University Press 2018).

⁸⁶ Torbert (n 81), 59.

⁸⁷ David Bromell, *Regulating Free Speech in a Digital Age: Hate, Harm and the Limits of Censorship* (Springer Nature 2022) 55-80.

⁸⁸ *Ibid.*

⁸⁹ Adam Kramer, Jamie E Guillory and Jeffrey T Hancock, 'Experimental evidence of massive-scale emotional contagion through social networks' (2014) 111(24) *Proceedings of the National Academy of Sciences* 8788, 8790.

⁹⁰ For instance, Facebook research was revealed to target insecure youth. See: Sam Levin, 'Facebook told advertisers it can identify teens feeling "insecure" and "worthless"' (*The Guardian*, 1 May 2017) <<https://www.theguardian.com/technology/2017/may/01/facebook-advertising-data-insecure-teens>> accessed 10 August 2023.

as “reactions” in addition to the “like” button,⁹¹ that allow inferring users’ feelings about specific issues with greater accuracy. The prevalence of such proprietary research as well as how it is used, however, is generally not public knowledge.

Against the backdrop of the economic logic that drives platforms’ behaviour and ultimately shapes users’ experiences, it can be observed that from the perspective of the company, the different roles that users undertake online, often simultaneously, seem to bear little importance – the mechanisms of engagement remain the same.⁹² For instance, a user of social media services is a consumer, a citizen engaging in political and civic activities, a co-producer of digital content and a friend or a family member connecting socially.⁹³ When it comes to political microtargeting, companies do not have an incentive to distinguish between different targeted audiences: it does not matter whether the ad reaches a user-citizen or a user-consumer, in effect treating citizens as consumers.

2.3. The Power of Big Technology Companies

The analysis of the position of Meta and Google (and other leading technology companies) in the data value chain for political microtargeting cannot be seen in isolation from the power of big technology companies, which for the purposes of this article is labelled *Modern Bigness*.⁹⁴ Modern Bigness, as a descriptor of power of digital conglomerates, discerns the foundations of their power, its dimensions and manifestations.

⁹¹ Leigh E Gray, ‘Thumb War: The Facebook Like Button and Free Speech in the Era of Social Networking’ (2012) 7 *Charleston Law Review* 447, 456; Josh Constine, ‘Facebook enhances everyone’s like with love, haha, wow, sad, angry buttons’ (*TechCrunch*, 24 February 2016) <[⁹² Matthias Pfeffer, ‘The power of algorithms and the structural transformation of the digital public’ in Sven Quadflieg, Klaus Neuburg and Simon Nestler \(eds\) \(*Dis\)Obedience in Digital Societies: Perspectives on the Power of Algorithms and Data* \(Transcript Publishing 2022\) 307.](https://techcrunch.com/2016/02/24/facebook-reactions/?guce_referrer=aHR0cHM6Ly93d3cuZ29vZ2x-llmNvbS8&guce_referrer_sig=AQAAAEMJEEsYKIi3ITmgnuFisXW7a0hRGM4-SJspmqPWVF-mUA3po6UNp4BvoxwhZXayftrMT_11mXrM1C10he_DSPU6clyIPDLl2uNUaDU_tbZHnCOD-M1lr7Z9qk8ZBggdP7ZiXke_MEtd-bJbvVZG-YW1lsfV-2P4lsUAZ-1y9uIVMy&gucounter=2> accessed 10 August 2023.</p></div><div data-bbox=)

⁹³ Online an individual is a user – a digital self – plays a variety of roles, sometimes an amalgam at once: she is a consumer, a social actor, a producer (or “prosumer”), a distributor and citizen. Also see: José van Dijck, David Nieborg, and Thomas Poell, ‘Reframing platform power’ (2019) 8(2) *Internet Policy Review* 1, 5-6; Alvin Toffler, *The third wave* (Vol. 484, Morrow 1980); Gerbrandy and Phoa (n 8); Minna Lammi and Mika Pautzar, ‘The data economy: how technological change has altered the role of the citizen-consumers’ (2019) 59 *Technology in Society* 101157.

⁹⁴ Gerbrandy and Phoa (n 8); Anna Gerbrandy, ‘Conceptualizing Big Tech As ‘Modern Bigness’ and Its Implications for European Competition Law Submission in Reaction to the Call for Contributions – Shaping Competition Policy in the Era of Digitalization’ (2018) <<https://ssrn.com/abstract=3275235>> accessed 10 August 2023.

The foundations of the power of big technology companies lie in their market power, which is the relevant way of construing power in competition law context (see section 2.1). In this regard, high market shares provide a first indication of concentration in a relevant market. Most of the big technology companies' core platform services are considered to hold strong market positions in their respective markets.⁹⁵ Nevertheless, this modular way of looking at their services (e.g., Facebook's position in the social networking market) does not capture the breadth of the foundation of power of big technology companies within and beyond their constantly evolving platform ecosystems.⁹⁶ Their power is further grounded in the ability to acquire start-ups and competing businesses, leading to envelopment into adjacent markets,⁹⁷ as well as capabilities to gather, analyse and, ultimately, monetise vast user data across the interconnected business lines. Focusing on political microtargeting, these elements are important in understanding how Meta and Google's (advertising) infrastructures are instrumental for any political campaign of scale.

Based on these foundations, the power of big technology companies has several dimensions. An *instrumental* dimension, in which power has a direct influence over actions of other actors; a *structural* dimension in which power is used to influence agenda-setting, delineation of a scope of options, and directions of how self-regulation is understood; and a *discursive* dimension in which the power shapes societal and political discourses, ideas and norms.⁹⁸ In political microtargeting processes, big technology companies do not only provide advertising infrastructure, but also the terms that determine who can or cannot advertise, and shape the content and the way the message reaches the user.⁹⁹

These dimensions of power seem to manifest across all domains of human activity and connectivity, including economic domain, political domain, social domain, and

⁹⁵ In European competition law terms, a number of these core platform services have also been consistently found to hold dominant positions within their respective relevant markets. For example, in February 2022 in Europe, Facebook held 80.22% market share in a social media market, see: StatCounter Global Stats, 'Social Media Stats Europe' <<https://gs.statcounter.com/social-media-stats/all/europe>> accessed 10 August 2023; Google held 92.43% in search engine market, see: StatCounter Global Stats, 'Search Engine Market Share Europe' <<https://gs.statcounter.com/search-engine-market-share/all/europe>> accessed 10 August 2023.

⁹⁶ Ulrich Dolata and Jan-Felix Schrape, 'Platform architectures: The structuration of platform companies on the Internet' (2022) SOI Discussion Paper 2022-01, 8; Van Dijk, Poell and de Waal (n 1); Amrit Tiwana, *Platform ecosystems: Aligning governance, and strategy* (Morgan Kaufmann 2014).

⁹⁷ Gerbrandy and Phoa (n 8).

⁹⁸ Doris Fuchs, *Business Power in Global Governance* (Lynne Rienner 2007).

⁹⁹ For example, see Facebook's policy on ads about social issues, elections or politics, see: 'Ads about social issues, elections or politics', Meta Business Help Center <<https://www.facebook.com/business/help/1838453822893854>> accessed 10 August 2023; Daniel Kreiss and Shannon McGregor, 'The "arbiters of what our voters see": Facebook and Google's struggle with policy, process, and enforcement around political advertising' (2019) 36(4) *Political Communication* 499, 522.

personal domain.¹⁰⁰ While different dimensions of power have been present with the brick-and-mortar corporations as well, what separates Modern Bigness is the way these dimensions of power manifest *across* different domains. Due to the pervasiveness of digitalisation, technologies are inescapably mediating much of users' daily lives. The scope of big technology companies' platform ecosystems allows a continuous reach of users with precision that has not been possible before. In the digital economy, these domains are closely entwined. From the perspective of big technology companies, the roles that users hold in the different domains are not merely connected but irrelevant. As discussed in section 1.2, digital markets are driven by economic logic, and in that context, citizens are no different from consumers.

This contribution posits that big technology companies wield political power to a degree that extends beyond traditional conglomerates.¹⁰¹ When it comes to power in the political domain, it is outside the scope of this article to delve into the differences between the formal political power and how much of it is encroached by these companies. However, as politics is at the heart of society, when political power evolves or is taken up by specific actors, such developments have effects on that given society and how it is governed.¹⁰² In this regard, if it is accepted that the roles of consumers and citizens are entwined, the way big technology companies wield political power – by shaping discourse, relating to the political domain – may lead to the reduction of incommensurable democratic values, such as personal autonomy and equality, placing them within the economic metrics that ultimately threaten to negate their worth.¹⁰³

The case of political microtargeting provides a rich example in building this argument. While it is logical to consider the impact of political microtargeting on democratic processes and citizen values, the role of European competition law is less certain. The next section will further explore the interplay of political microtargeting and its effects

¹⁰⁰ These domains are elaborated upon in: Gerbrandy and Phoa (n 8), 172-173.

¹⁰¹ Political power of big technology companies ranges from heavy lobbying, campaign contributions, extensive to public relations, which are fairly traditional ways big businesses influenced democratic processes. The political power that seems to be unparalleled with the brick-and-mortar companies is the power to shape political discourse, manifesting through ability to influence the visibility of content, acting as *de facto* regulators when it comes to their policies, even taking controversial decisions such as suspending political figures from participation in the political debate on their platform (e.g., Trump's account). See: Martin Moore, 'Creating new electoral public spheres, in Regulating Big Tech: Responses to Digital Dominance' in Martin Moore and Damian Tambini (eds) *Regulating Big Tech: Policy Responses to Digital Dominance* (Oxford University Press 2021); Jan Polanski, 'The marketplace of ideas and EU competition law: can antitrust be used to protect freedom of speech?' (2022) *YSEC Yearbook of Socio-Economic Constitutions 2021: Triangulating Freedom of Speech* 99.

¹⁰² Alex Shokri, 'What is political power? (Theory of political consciousness and integrated concept of power)' (2017) 8(3) *Arts and Social Sciences Journal* 1, 1.

¹⁰³ Joseph Raz, *The morality of freedom* (Clarendon Press 1986); Michael J Sandel, 'What money can't buy: the moral limits of markets' (2000) 21 *Tanner Lectures on Human Values* 87, 122.

in the economic and political domains, highlighting the potential role for European competition law in safeguarding the affected democratic values.

3. European Competition Law and the Impact of Political Microtargeting on Democracy

In European competition law, the abuse of dominance prohibition concerns addressing the negative manifestations of *market power* in the economic domain. While the relationship between competition law and democracy has been a thorny subject in legal scholarship, the rise of the digital economy and big technology companies has led to a revived interest in the issue.¹⁰⁴ In light of this ongoing debate, this section will introduce and question the market-oriented interpretation of European competition law and advance the discussion by zooming in on a specific case of political microtargeting. It will consider citizen values that are negatively affected by political microtargeting, as well as their relationship with European competition law.

3.1. European Competition Law in an Open and Democratic Society

The notion of free and unrestricted competition underpins many of the EU's market-oriented policies. Together with the four market freedoms and, after the Maastricht Treaty of 1992, the European Monetary Union, competition rules form part of the European economic constitutional framework, set to advance the overarching Community integration objectives.¹⁰⁵ While the EU's legal order does not contain a written constitution in the classical sense of a nation-state, its economic constitution is comprised of foundational principles and norms that govern the rights and responsibilities of both public and economic actors in the (European) economic domain and is enshrined in the Treaties.¹⁰⁶

Competition rules (article 101 TFEU and article 102 TFEU) were part of the founding Treaties of the EU, with provisions drafted in a broad and abstract manner, their interpretation left to the enforcement and judicial authorities.¹⁰⁷ In this context, the Commission is the main authority responsible for enforcement and competition policy shaping. Nevertheless, the Courts are the final arbiters of EU law.

¹⁰⁴ Robertson (n 2); Gerbrandy (n 4); Waller Weber (n 4).

¹⁰⁵ Armin Hatje, 'The economic constitution within the internal market' in Armin von Bogdandy and Jurgen Bast (eds) *Principles of European Constitutional Law* (Bloomsbury Publishing 2010) 593.

¹⁰⁶ Gerbrandy (n 4), 128.

¹⁰⁷ Laura Parret, 'Shouldn't we know what we are protecting? Yes we should! A plea for a solid and comprehensive debate about the objectives of EU competition law and policy' (2010) 6(2) *European Competition Journal* 339, 343.

European competition law is a legal field most closely related to ensuring the proper functioning of the market mechanism. The notion of market power is central to the logic of competition rules, as excessive market power leads to market failure.¹⁰⁸ This article focuses on the abuse of dominance prohibition,¹⁰⁹ according to which dominant companies hold a special responsibility not to abuse their position in a specific relevant market: competition law protects against abusive manifestations of market power where it leads to exclusionary, exploitative, or discriminatory conduct to the detriment of consumers.¹¹⁰ In this context, “dominance” is a narrowly construed concept and is not, as such, prohibited.

The early stages of competition law enforcement were characterised by formalistic analyses yielding heavy criticism about the lack of predictability of the methods for determining and applying substantive competition law norms.¹¹¹ However, since the late 1990s, the procedural and substantive modernisation process placed economic analysis at the forefront of European competition law enforcement.¹¹²

Substantive modernisation had two main components: the apparent narrowing – compared to the previous decades and the case law of the Court – of the goals of European competition law to the (mostly)¹¹³ protection of consumer welfare and prioritising the neo-classical economics’ methods and tools of analysis.¹¹⁴ Consumer welfare provides a concrete standard to guide competition law enforcement in prioritising and addressing harmful market behaviour.¹¹⁵ Though the notion itself has continued to be difficult to fully capture, consumer welfare is generally understood through the lens of economic efficiencies.¹¹⁶ In the EU, the emphasis is placed on maximising consumer rather than total (including producer) surplus, meaning that the intermediate and final consumers are placed at the heart of the competition

¹⁰⁸ Gerbrandy (n 4), 129.

¹⁰⁹ European competition law (as do many competition law regimes) has three strands: a prohibition against anti-competitive agreements (cartels), a regime of merger control and a prohibition against abuse of dominance.

¹¹⁰ Case 322/81 *Nederlandsche Banden Industrie Michelin (Michelin I) v Commission* [1983] ECR 3461, para 57.

¹¹¹ Pablo Ibáñez Colomo and Andriani Kalintiri, ‘The evolution of EU antitrust policy: 1966-2017’ (2020) 83(2) *The Modern Law Review* 321, 334; David J Gerber, ‘Two forms of modernization in European competition law’ (2008) 31 *Fordham International Law Journal* 1235, 1246.

¹¹² Gerber (n 111).

¹¹³ Mostly, because also dynamic competition plays a role.

¹¹⁴ Gerber (n 111), 1247; Okeoghene Odudu, ‘The wider concerns of competition law’ (2010) 30(3) *Oxford Journal of Legal Studies* 599, 613.

¹¹⁵ Ariel Ezrachi, ‘EU competition law goals and the digital economy’ (2018) Oxford Legal Studies Research Paper No.17/2018, 5.

¹¹⁶ Anna Gerbrandy and Rutger Claassen, ‘Rethinking European Competition Law: From a Consumer Welfare to a Capability Approach’ (2016) 12 *Utrecht Law Review* 1, 15.

policy.¹¹⁷ However, there is a tension between consumer welfare and other public values, as in this paradigm, the success of competitive markets is assessed exclusively in relation to welfare rather than promotion of individual freedoms.¹¹⁸

While the shift in the enforcement priorities came from the Commission, the Court did not explicitly embrace consumer welfare as an overarching goal and instead treated it as *one* of the possible aims of competition law.¹¹⁹ This approach is aligned with the understanding that competition rules are not implemented in isolation from other policies of the Union. They are interpreted consistently with the goals of the Treaty, requiring balancing of different objectives against each other.¹²⁰ The pluralist conception of competition law's goals is a relevant aspect in assessing whether political microtargeting can be addressed by this legal field.

To uncover the goals and normative underpinnings of European competition law, it is necessary to position this legal field in the perspective of its historical roots, as well as consider it in the overarching normative theories and values that underpin the EU's constitutional identity.

In this regard, it is relevant to acknowledge that Ordoliberalism was influential in the formative period of competition law and policy, the period between 1960s and 1980s marking an increase in the use of Ordoliberal language and ideas in competition

¹¹⁷ Svend Albaek, 'Consumer welfare in EU competition policy' in Caroline Heide-Jørgensen and others (eds) *Aims and values in competition law* (DJØF Publishing 2013) 88; Victoria Daskalova, 'Consumer Welfare in EU Competition Law: What Is It (Not) About?' (2015) *Competition Law Review* 131, 144-145; Pinar Akman, '“Consumer” versus “Customer”: the Devil in the Detail' (2010) 37(2) *Journal of Law and Society* 315, 344.

¹¹⁸ Amartya Sen, *Rationality and Freedom* (2nd edn, Harvard University Press 2004), 502.

¹¹⁹ Ioannis Lianos, 'Some reflections on the question of the goals of EU competition law' in Ioannis Lianos and Damien Geradin (eds) *Handbook on European Competition Law: Substantive Analysis* (Edward Elgar Publishing 2013); Anne C. Witt, 'Public policy goals under EU competition law – now is the time to set the house in order' (2012) 8(3) *European Competition Journal* 443, 471. Daskalova (n 117), 144-145; Case C-8/08 *T-Mobile Netherlands BV v Raad van bestuur van de Nederlandse Mededingingsautoriteit* [2009] ECLI:EU:C:2009:343, para 38.

¹²⁰ Consolidated version of the Treaty on European Union and the Treaty on the Functioning of the European Union [2012] OJ C326/01, article 7: "The Union shall ensure consistency between its policies and activities, taking all of its objectives into account and in accordance with the principle of conferral of powers". See also on the discussion: Witt (n 119), 471; Johannes Persch, 'The role of fundamental rights in antitrust law – a special responsibility for undertakings with regulatory power under article 102 TFEU?' (2021) 17(3) *European Competition Journal* 542, 566.

law interpretation and policy shaping.¹²¹ As any political and economic philosophy movement, Ordoliberalism has many incarnations, but its ideas are ultimately concerned with the interactions between and balancing of private (market) and public (state) power.¹²² Excessive power in either domain is perceived as dangerous due to the risk of distortion of markets or political capture.¹²³ According to the Ordoliberals, the solution lies in establishing a constitutional framework that would protect the process of competition from undue interference by economic power and would enable limited state intervention into the market.¹²⁴

Central to the Ordoliberal value system is that “freedom” is not merely one of the values to be protected but the source and the premise for the existence of all other individual values.¹²⁵ In this regard, economic freedom refers to market actors’ freedom in the economic domain. Within the proposed constitutional framework, the state’s authority allows to set and enforce the rules that determine the character of freedom, which is derived from the responsibility for the whole society.¹²⁶ Ordoliberalism diverges from laissez-faire liberalism, which does not recognise the positive role that the government plays in creating and safeguarding appropriate rules and institutions that enable effective competition.¹²⁷

Against this background, European competition rules can be seen as part of modern liberalism in which the political order is oriented either mostly towards *individuals* or

¹²¹ Laurent Warlouzet, ‘The EEC/EU as an Evolving Compromise between French Dirigism and German Ordoliberalism (1957-1995)’ (2019) 57 *Journal of Common Market Studies* 77; Anselm Küsters, *The Making and Unmaking of Ordoliberal Language. A Digital Conceptual History of European Competition Law* (doctoral thesis, University of Frankfurt, June 2022). Forthcoming in the series “Studien zur europäischen Rechtsgeschichte”, published by Klostermann (2023); Gerbrandy (n 4); Werner Bonefeld, ‘Freedom and the Strong State: on German Ordoliberalism’ (2012) 17(5) *New Political Economy* 633; Gerber (n 111), 1246; Kaarlo H Tuori and Klaus Tuori, *The Eurozone crisis: a constitutional analysis* (Cambridge University Press 2014); On overstated influence of Ordoliberalism on European competition law, see: Pinar Akman, ‘The role of freedom in EU competition law’ (2010) 34(2) *Legal Studies* 183, 213.

¹²² Massimiliano Vatiéro, ‘The ordoliberal notion of market power: an institutionalist reassessment’ (2010) 6(3) *European Competition Journal* 689.

¹²³ Terence Hutchinson, ‘Ordoliberalism and the Social Market: Classical Political Economy from Germany’ in Razeen Sally (ed), *Classical Liberalism and International Economic Order. Studies in Theory and Intellectual History* (Routledge 1998) 110.

¹²⁴ Vatiéro (n 122), 700.

¹²⁵ Elzbieta Maczynska and Piotr Pysz, ‘Classical liberalism, neoliberalism and ordoliberalism’ (2015) 1 *Oikonomos: Journal of Social Market Economy* 17, 29.

¹²⁶ Nils Goldschmidt and Hermann Rauchenschwandtner, ‘The Philosophy of Social Market Economy: Michel Foucault’s Analysis of Ordoliberalism’ (2018) 138(2) *Journal of Contextual Economics-Schmollers Jahrbuch* 157, 184; Bonefeld (n 121), 648: Competitive markets depend on the provision of a ‘robust political-legal-ethical-institutional framework’ and its delivery is a matter of a state authority.

¹²⁷ Viktor J Vanberg, ‘The Freiburg School: Walter Eucken and Ordoliberalism’ (2004) *Freiburger Diskussionspapiere zur Ordnungsökonomik* No.04/11, 9.

mostly towards *society*.¹²⁸ While the former is focused more on individualistic ethics and perceives society as consisting of individuals that act in their own self-interest, the latter is focused on treating individuals as citizens and acknowledges the role of the state in adjusting the social imbalances.¹²⁹ With the enactment of the Treaty of Lisbon, this view is further reflected in the EU's commitment to pursuing a "highly competitive social market economy", according to which the Union inherently and simultaneously pursues economic and social objectives.¹³⁰

The social market economy, thus, can be viewed as a basis of the EU's economic system, with fundamental values enshrined in article 2 TEU aiding in forming the vision for its implementation:

"The Union is founded on the values of respect for human dignity, freedom, democracy, equality, the rule of law and respect for human rights, including the rights of persons belonging to minorities. These values are common to the Member States in a society in which pluralism, non-discrimination, tolerance, justice, solidarity and equality between women and men prevail".¹³¹

This means that on a constitutional level, the social dimension is an inseparable part of the EU's broader economic policy agenda.¹³² Furthermore, despite the widely discussed

¹²⁸ Klaus D John, 'The German Social Market Economy – (Still) a Model for the European Union?' (2007) 3(508) *Theoretical and Applied Economics* 3, 5.

¹²⁹ Ibid.

¹³⁰ Consolidated Version of the Treaty on European Union (TEU) [2012] OJ C 326/13, article 3; Anna Gerbrandy, Willem Janssen and Lyndsey Thomsin, 'Shaping the Social Market Economy After the Lisbon Treaty: How 'Social' is Public Economic Law?' (2019) 15(2) *Utrecht Law Review* 32, 46; Hugo Canihac and Francesco Laruffa, 'From an Ordoliberal idea to a social-democratic ideal? The European Parliament and the institutionalization of social market economy in the European Union (1957-2007)' (2022) 60(4) *Journal of Common Market Studies* 867.

¹³¹ TEU (n 130), article 2.

¹³² The nature of competition in the "social market economy" context is not undisputed. Some commentators argue that competition policy is not meaningfully impacted by this aim of the EU, while others see a possibility for a nuanced incorporation of non-economic goals. For discussion, see: Gerbrandy, Thomsin and Janssen (n 30); Christian Joerges and Florian Rödl, 'Social market economy as Europe's Social Model' (2004) EUI Working Paper LAW No.2004/8, 14 <<https://ssrn.com/abstract=635362>> accessed 10 August 2023; Fritz W Scharpf, 'The double asymmetry of European integration: Or: why the EU cannot be a social market economy' (2009) No. 09/12. MPIfG Working Paper.

democratic deficit and the lack of comprehensive democracy policy across the EU,¹³³ democracy is doubtlessly a leading principle,¹³⁴ forming its foundational core.

The above discussion does not suggest that European competition law ought to safeguard *all* European values. It does, however, necessitate considering this legal instrument beyond the confines of the economic domain. In this regard, for the purposes of this article, it is important to make the link between competition law and democracy explicit. The idea that competition law contains political content is generally accepted.¹³⁵ It lies in the historical roots of concentration of economic power contributing to the erosion of democracy, necessitating “laws and institutions of anti-power, which ensure the contestability of power in the political and non-political sphere”.¹³⁶ As any legal discipline, competition law derives its validity from evolving societal norms that form the foundations and values of its respective jurisdiction.¹³⁷ The EU’s normative direction towards an open and democratic society, based on the rule of law, is further reflected in the Communication from the Commission concerning the amendments to the *Guidance on Enforcement Priorities in applying Article 82 EC*, where the Commission for the first time explicated that competition can “contribute to

¹³³ Sacha Garben, ‘The Constitutional (im)balance between ‘the Market’ and ‘the Social’ in the European Union’ (2017) 13(1) *European Constitutional Law Review* 23, 29: “...while concerns about the EU’s democratic deficit continue to persist, in terms of input legitimacy the EU legislative process is the most accountable form of international cooperation, reinforced by many reforms over time to enhance the role of both the European Parliament and national parliaments.” See also: Richard Youngs, ‘Patterns and Particularities in European Democracy’ (Centre for European Policy Studies, 4 March 2020) <<https://carnegieeurope.eu/2020/03/04/patterns-and-particularities-in-european-democracy-pub-81458>> accessed 11 August 2023.

¹³⁴ Micheal McFaul, ‘Democracy promotion as a world value’ (2010) 28(1) *The Washington Quarterly* 147, 161: “The democratic criteria for the membership to the EU have become so institutionalized that individual leaders of states already in the EU now have limited power to impede the process of the accession.”

¹³⁵ Deutscher and Makris (n 4), 214; Kati Cseres, ‘EU Competition Law and Democracy in the Shadow of Rule of Law Backsliding’ (2022) Amsterdam Law School Research Paper No. 2022-05 <<https://ssrn.com/abstract=4032499>> accessed 11 August 2023; Flavio Felice and Massimiliano Vatiery, ‘Ordo and European Competition Law’ (2015) 32 *Research in the History of Economic Thought and Methodology* 147. See American scholars: Daniel A Crane, ‘Antitrust as an Instrument for Democracy’ (2022) 72(21) *Duke Law Journal Online* 21, 40; Waller Weber (n 4), 860; Robert Pitofsky, ‘Political content of antitrust’ (1978) 127 *University of Pennsylvania Law Review* 1051; Lina M Khan and Zephyr Teachout, ‘Market structure and political law: a taxonomy of power’ (2014) 9 *Duke Journal of Constitutional Law and Public Policy* 37 (2014); Eleanor M Fox, ‘Antitrust and Democracy: How Markets Protect Democracy, Democracy Protects Markets and Illiberal Politics Threatens to Hijack both’ (2019) 46(4) *Legal Issues of Economic Integration* 317.

¹³⁶ Elias Deutscher, ‘The Competition-Democracy Nexus Unpacked – Competition Law, Republican Liberty, and Democracy’ (2022) *Yearbook of European Law* 1, 18. In the context of the US, Sherman Act was enacted to manage spread of trusts, with Senator Sherman stating: “If we will not endure the king as a political power, we should not endure a king over production, transportation, and sale of any of the necessities of life.” See: Denise Hearn and Jonathan Tepper, *The myth of capitalism: monopolies and the death of capitalism* (Wiley 2018) 141.

¹³⁷ Ariel Ezrachi, ‘Sponge’ (2017) 5(1) *Journal of Antitrust Enforcement* 49, 51.

objectives that go beyond consumer welfare, such as plurality in a democratic society”¹³⁸. Nevertheless, there is little understanding as to what this link with democracy entails in practice.¹³⁹

In light of the challenges raised by the digital transition, the examination of the goals of European competition law and whether safeguarding consumer welfare should be its principal aim, has been reinvigorated.¹⁴⁰ This article focuses on the rise of big technology companies as powerful corporate structures, which have gradually permeated institutions and practices through which democratic societies are organised.¹⁴¹ However, these companies remain largely unaccountable to user-citizens for the power they exert in shaping the public discourse.¹⁴² As digitalisation has blurred the line between the consumer and the citizen, re-examining the role of competition law in protecting public values is ever-more salient. Political microtargeting provides a rich study inquiry, since, as will be showcased in the following section, it negatively impacts citizen values.

3.2. Citizen Values in the EU: Freedom, Autonomy and Equality

The EU and its Member States are built on the tenets of an open and democratic society, based on the rule of law, committed to protecting civil liberties and fundamental rights. In a democratic society, citizens play a key role in the functioning of the political system, by participating in it and by holding political actors accountable for their actions.

At the heart of the democratic processes is the “public sphere”, which in the Habermasian perspective refers to “a realm of our social life in which something

¹³⁸ Commission ‘Amendments to the Communication from the Commission Guidance on the Commission’s enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings’ (Communication) C(2023) 1923 final <https://competition-policy.ec.europa.eu/system/files/2023-03/20230327_amending_communication_art_102_0.pdf> accessed 8 August 2023.

¹³⁹ Crane (n 135), 22.

¹⁴⁰ Fox (n 135), 328.

¹⁴¹ Van Dijk, Poell and de Waal (n 1).

¹⁴² Khan and Teachout (n 135), 74.

approaching public opinion can be formed”¹⁴³. In essence, it is a space in which people deliberate over matters of common interest, matters that are contested, and matters that require a consensus.¹⁴⁴ A well-functioning public sphere is conditional upon citizens’ guaranteed ability to access it. It presupposes freedoms of speech and assembly, a free press, and the right to freely participate in political discourse, which allows them to shape policy and hold the government accountable.¹⁴⁵ The public sphere is distinguished from markets, the economic sphere, and institutions of business.¹⁴⁶ The existence of a common public sphere in the EU remains contested due to the perceived lack of collective identity across the Member States, but it nevertheless is an important normative component of the ideal of (deliberative) democracy.¹⁴⁷

In order to discern the citizen values that will serve as benchmarks for the purposes of evaluating the impact of political microtargeting and assessing the potential role for European competition law, it is firstly necessary to come back to the notion of *freedom*, which underpins the functioning of market economies as well as democratic systems. As mentioned above, ‘freedom’ is a value enshrined in article 2 TEU and also underpins its market integration goal. A distinction can be made between “positive” and “negative” freedom.¹⁴⁸ Positive freedom involves overcoming inner obstacles and

¹⁴³ Habermas’ “public sphere” could be considered to be a normative ideal, and despite being critiqued for inter alia not accounting for multiple and competing publics in contemporary capitalist democracies, it has been a highly influential concept in the contemporary political philosophy debate. See: Jürgen Habermas, *The Structural Transformation of the Public Sphere: An Inquiry into a Category of Bourgeois Society* (MIT Press 1991); Jürgen Habermas, Sara Lennox and Frank Lennox, ‘The Public Sphere: An Encyclopedia Article (1964)’ (1974) 3 *New German Critique* 49, 49; Jürgen Habermas, ‘Reflections and hypotheses on a further structural transformation of the political public sphere’ (2022) 39(4) *Theory, Culture & Society* 145. In this piece, Habermas reflects on the “public sphere” in the digital environment. He is critical of the evasion of duties of the journalistic care by digital platforms (see p.165). See more on public sphere in the digital realm: Zizi Papacharissi, ‘The Virtual Sphere: The Internet as a Public Sphere’ (2022) 4(1) *New Media & Society* 9, 29; Martin Seeliger and Sebastian Sevnigani, ‘A New Structural Transformation of the Public Sphere? An Introduction’ (2022) 39(4) *Theory, Culture & Society* 3, 10-14.

¹⁴⁴ Jodi Dean, ‘Why the Net is not A Public Sphere’ (2003) 10(1) *Constellations* 95, 112.

¹⁴⁵ Douglas Kellner, ‘Habermas, The Public Sphere, and Democracy’ in Diana Boros and James M Glass (eds) *Re-Imagining Public Space* (Palgrave Macmillan 2014) 264.

¹⁴⁶ Terry Flew, ‘Public Spheres Old And New: From Mass Communication To Digital Platforms’ (2022) 4 <<https://ssrn.com/abstract=4143946>> accessed 11 August 2023.

¹⁴⁷ Erik Oddvar Eriksen, ‘An emerging European public sphere’ (2005) 8(3) *European Journal of Social Theory* 341, 363; Plamen Akaliyski, Christian Welzel and Josef Hien, ‘A community of shared values? Dimensions and dynamics of cultural integration in the European Union’ (2022) 44(4) *Journal of European Integration* 569, 590.

¹⁴⁸ This distinction was made in the seminal work of Berlin: Isaiah Berlin, *Four essays on liberty* (Oxford University Press 1969). Note, another variation of freedom, titled “Republican freedom”, which is closely tied to the liberal notion of freedom, but defines freedom “as a sort of structural independence – as the condition of not being subject to the arbitrary or uncontrolled power of a master”. Thus, it is closely related to the idea that freedom is conditional upon non-domination. For the purposes of this article, however, the choice is made to focus on the classic dichotomy between positive and negative freedom. See: Frank Lovett, ‘Republicanism’ in Edward N Zalta and Uri Nodelman (eds), *The Stanford Encyclopedia of Philosophy* (2022) <<https://plato.stanford.edu/archives/fall2022/entries/republicanism/>> accessed 20 August 2023.

enables individuals to realise their capabilities. Negative freedom concerns freedom from external intervention and focuses on how freedom is exercised, highlighting an individual's capacity to make autonomous decisions.¹⁴⁹

Political freedom is a core value in democratic processes. It encompasses various aspects, including freedom of speech, freedom of thought, rights of voting and political participation, as well as the right to information and equality before the law. It is relevant to observe, however, that while in liberal democracies civil liberties and freedoms are guaranteed as individual rights, they have an essentially collective context and purpose: participating in expressing opinions, persuading, mobilising support, and all the other activities intrinsic to the democratic process, are viewed as part of the public sphere rather than as private decision-making.¹⁵⁰

In general, as well as in the specific context of the EU legal system, political freedom is closely linked to economic freedom. From this perspective, positive aspects of economic freedom relate to market actors' rights to participate in the market and develop their own potential and the negative aspects of economic freedom guarantee them with the ability to exercise those rights without interference to market opportunities because of anticompetitive behaviour.¹⁵¹ Economic freedom is important for the overall prosperity of a given society. However, it is not without bounds since absolute economic freedom can lead to abuse.¹⁵² In a hypothetical scenario, the State granting complete freedom to market actors may lead to restriction of competition, thereby infringing upon freedom of others.¹⁵³ This view is also endorsed in European competition case law, as the Court explicitly refers to "economic freedom" and its variations.¹⁵⁴

The two conceptions of freedom are linked as private economic power may shift from the economic to political domain, leading to the threat of not only limiting economic freedom of other market actors, but also to the threat of undermining democratic processes. This concern, clearly present in the abovementioned Ordoliberal school of thought, exists independently of whether the concentration of private market power

¹⁴⁹ Sen (n 118), 10.

¹⁵⁰ David Beetham, 'The quality of democracy: freedom as foundation' (2004) 15(4) *Journal of Democracy* 61, 75.

¹⁵¹ Renato Nazzini, *The foundations of European Union competition law: the objective and principles of Article 102* (Oxford University Press, 2011) 21.

¹⁵² Bastiaan Rijpkema, 'Popper's paradox of democracy' (2012) 11(32) *Think* 93.

¹⁵³ Joseph Drexler, 'Competition law as part of the European constitution' in Armin von Bogdandy and Jürgen Bast (eds) *Principles of European Constitutional Law* (Bloomsbury Publishing 2010) 660.

¹⁵⁴ Case T-201/04 *Microsoft Corp. v Commission of the European Communities* [2007] ECLI:EU:T:2007:289, para 646; Joined cases 56 and 58-64 *Établissements Consten S.à.R.L. and Grundig-Verkaufs-GmbH v Commission of the European Economic Community* [1966] ECLI:EU:C:1966:41, 339; T-228/97 *Irish Sugar plc v Commission of the European Communities* [1999] ECLI:EU:T:1999:246, paras 6 and 9. Akman, on the other hand, provides a critical account of the role of freedom in European competition law: Akman (n 121).

leads to an overall increase in welfare, and therefore necessitates balancing of these values, prioritised in a given society.¹⁵⁵

As discussed above, in the context of the rise of big technology companies as corporate structures that have become interwoven into the modern societal fabric, political freedom is at stake too. In this regard, political microtargeting processes depend on this (market) power, which can lead to adverse effects on the public sphere. The assessment of the role of political microtargeting in democratic societies largely enters the picture during the electoral processes, particularly campaigning. Deliberation plays a key role in electoral processes since it allows engaging and informing citizens in a reasoned discussion about the issues and candidates in the election. Connected to the general value of *political freedom*, citizen-values that are necessary for the realisation of this democratic pursuit are, at the very least, *personal autonomy* as an essential precondition of political freedom, and *equality* of citizens, a fundamental value that reinforces it.¹⁵⁶

As to, firstly, the value of autonomy, the deliberation that is at the heart of the public debate among all citizens rests on citizens who enjoy personal autonomy to freely choose the ideas (and political candidates) they wish to support. The idea that people should possess legal and political rights in relation to public power is derived from the value of autonomy, as individuals have the right to make their own choices and society should enable them to control their own lives.¹⁵⁷ According to the liberal conception of personal autonomy as “self-rule” is constituted by “independence of one’s deliberation and choice from manipulation by others, and the capacity to rule oneself”.¹⁵⁸ It rests upon the idea that one does not only follow her desires but is also capable of choosing which desires to follow.¹⁵⁹ Thus, coercion would generally be invasive of personal autonomy because it diminishes options.¹⁶⁰ Furthermore, to meaningfully enjoy personal autonomy, an individual must largely be free from manipulation.¹⁶¹ Therefore, throughout the democratic decision-making process, an autonomous citizen must face

¹⁵⁵ Frank Maier-Rigaud, ‘On the Normative Foundations of Competition Law: Efficiency, Political Freedom and the Freedom to Compete’ in Daniel Zimmer (ed) *The Goals of Competition Law* (Edward Elgar Publishing 2012) 164.

¹⁵⁶ By ensuring that all citizens have an equal voice in the democratic debate and that each citizens’ votes count equally.

¹⁵⁷ Geoffrey Brahm Levey, ‘Confronting autonomy in liberal practice’ in Marie-Claire Foblets, Michele Graziadei and Alison Renteln (eds) *Personal Autonomy in Plural Societies: a Principle of Paradoxes* (Routledge 2017) 38.

¹⁵⁸ John Christman, ‘Autonomy in Moral and Political Philosophy’ in Edward N Zalta (ed), *The Stanford Encyclopedia of Philosophy* (2020) < <https://plato.stanford.edu/entries/autonomy-moral/#AutLib-ConValEndCon> > accessed 8 August 2023.

¹⁵⁹ Jeremy Waldron, ‘Moral autonomy and personal autonomy’ in John Christman and Joel Anderson (eds) *Autonomy and the Challenges to Liberalism* (Cambridge University Press 2005) 307.

¹⁶⁰ Raz (n 103), 377.

¹⁶¹ *Ibid*, 377-78.

minimal physical and psychological interference in her actions and choices. Instead, democratic processes are fuelled by debate, persuasion, and deliberation.

Secondly, equality is a fundamental pre-condition for the idealised public sphere.¹⁶² Equality is closely connected to political freedom, as the two share a mutually reinforcing association.¹⁶³ It can be conceptualised at two distinct levels: structural and discursive. Structural equality refers to the notion of access or inclusivity to discursive spaces.¹⁶⁴ It implies that all affected by the discussed issues should have equal access to the democratic process (e.g. voting or deliberating).¹⁶⁵ Discursive equality requires “that all participants within the process of deliberation to be considered equal members”.¹⁶⁶ Therefore, the process cannot be such that it privileges one individual or group over another; each individual recognises and respects that another has an equal standing; voice should be distributed equally (meaning that no one group or individual should dominate the conversation at the expense of others); and finally, the process must maintain an adequate level of respect among different participants.¹⁶⁷

Related to political freedom, the values of personal autonomy and equality are fundamental to democratic processes and lie at the heart of the EU and its Member States. As a result, they will be used as benchmarks for evaluating the effects of political microtargeting on democratic processes.

3.3. Political Microtargeting and its Impact on Citizen Values

Digital technologies have initially been viewed as democratising instruments, holding a promise that political discourse online will increase political participation and extend access, information and communication to create enhanced opportunities for opinion-formation.¹⁶⁸ However, in practice it has also led to “democratic deficits”, such as the spread of *inter alia* misinformation and fake news, filter bubbles, unjustified censorship, and bias in the public debate.¹⁶⁹ As the wheels of the digital economy are oiled by user engagement, deliberation of (political) content has become closer to a

¹⁶² Davy Janssen and Raphael Kies, ‘Online forums and deliberative democracy’ (2005) 40(3) *Acta Politica* 317, 329.

¹⁶³ Heiko Giebler and Wolfgang Merkel, ‘Freedom and equality in democracies: is there a trade-off?’ (2016) 37(5) *International Political Science Review* 594, 602.

¹⁶⁴ Todd S Graham, *What's Wife Swap got to do with it: Talking Politics in the net-based public sphere* (PhD dissertation, University of Amsterdam Amsterdam, 2009) 19.

¹⁶⁵ Edana Beauvais, ‘Deliberation and equality’ in André Bächtiger and others (eds) *The Oxford Handbook of Deliberative Democracy* (Oxford University Press 2018) 145; Janssen and Kies (n 162), 329.

¹⁶⁶ Graham (n 164), 19.

¹⁶⁷ *Ibid.* Note, it is important to acknowledge that the outlined autonomy and equality conceptualisations are ideals. Citizens are generally not fully autonomous in a sense that there is no external interference or stimuli when it comes to electoral processes. Similarly, some groups are more likely to capture the democratic debate.

¹⁶⁸ Dean (n 144), 112; Papacharissi (n143), 29.

¹⁶⁹ Robertson (n 2), 279.

quick reflex instead of meaningful reflection.¹⁷⁰ This is because social media companies are operating mass communication as personalised communication, with user-citizens receiving information that strengthens their “filter bubble”.¹⁷¹ In the duality of the role of the user as both the consumer and citizen, this section focuses on evaluating how political microtargeting, a process in which big technology companies such as Google and Meta play a pivotal role, impacts citizen values of personal autonomy and equality.

As discussed above, *personal autonomy* requires independence of one’s deliberation and choice from manipulation by others, and the capacity to rule oneself. By adopting psychometric profiling practices and attempting to engage with users’ external and internal triggers, political microtargeting processes are designed to subvert their decision-making, thereby engaging in manipulation.¹⁷² Manipulation is an elusive concept, but for the purposes of this article it is sufficient to adopt a workable definition of “an action [that] attempts to influence people in a way that does not sufficiently engage or appeal to their capacities for reflective and deliberative choice”.¹⁷³ Political microtargeting aims at behavioural modification,¹⁷⁴ using – especially in the Cambridge Analytica case – neuromarketing principles to control the recipient’s behaviour by recognising and reacting to not only what they think or feel but also what they intend to do or what they desire, reaching voters beyond conscious level.¹⁷⁵ The manipulative potential of such neuromarketing techniques is amplified in digital environments as the targeting is based on voters’ data, enabling to distil their granular profiles and in turn appeal to personal context and circumstances. Furthermore, political microtargeting processes lack observability – the covertness of practices allows for seamless manufacturing of the perception of available options.¹⁷⁶ Thus, as both the elements of autonomy as “self-rule” are artificially limited by political microtargeting, this manipulative strategy can be said to violate user-citizens’ personal autonomy.¹⁷⁷

¹⁷⁰ Pfeffer (n 92), 304.

¹⁷¹ Ibid, 308.

¹⁷² He [Wylie] claimed that the company operated in an “ethical grey area” and “attempted to manipulate voters by latching onto their vulnerabilities.” Phil McCausland and Anna Schecter, ‘Cambridge Analytica harvested data from millions of unsuspecting Facebook users’ (*NBC News*, 17 March 2018) <<https://www.nbcnews.com/news/us-news/cambridge-analytica-harvested-data-millions-unsuspecting-facebook-users-n857591>> accessed 11 August 2023.

¹⁷³ Cass R Sunstein, ‘Fifty shades of manipulation’ (2015) *Journal of Behavioral Marketing* 1 <https://dash.harvard.edu/bitstream/handle/1/16149947/manipulation2_18.pdf?sequence=1%26isAllowed=y> accessed 8 August 2023; Daniel Susser, Beate Roessler and Helen Nissenbaum, ‘Technology, autonomy, and manipulation’ (2020) 8(2) *Internet Policy Review* 1, 22; Davit Harutyunyan and Lilit Yeremyan, ‘Freedom of thought: legal protection from manipulation’ (2020) 1(14) *Wisdom* 131, 138.

¹⁷⁴ “Microsoft employee Jaron Lanier has suggested that “advertising” is a misnomer; the proper name is “behavior modification”, see: Torbert (n 81), 30.

¹⁷⁵ In other words, neuromarketing methods and techniques indicated the path to a relevant deep psychological analysis on the influences of the human being irrational part in his decision-making process, and then used it back in all of its marketing processes. See Hegazy (n 24), 239.

¹⁷⁶ Morozovaite (n 9).

¹⁷⁷ Torbert (n 81), 36.

On an aggregate level, it can lead to concerns relating to how political discourses are shaped: by providing (or excluding) certain information, in a way which is opaque but shapes political behaviour and potentially reaches many. In this sense, the “public [becomes] engineered”.¹⁷⁸

In the political realm, *equality* refers to the idea that everyone has an equal opportunity to engage with and enter into a political domain. Each citizen’s vote counts equally, each individual has a right to (political) information.¹⁷⁹ Also, from a Habermasian perspective, democratic decisions are legitimate only if all citizens can freely reason with each other about policy. This requires deliberation on an equal footing.¹⁸⁰ Targeting different users with different messages means an imposed exclusion from certain political debates. This may not only lead to violation of rights of those that are targeted, but also violation of the right to information of those that are not targeted and are therefore not aware of the political messages others are exposed to, resulting in distortions in the public discourse.¹⁸¹ Political microtargeting thus also threatens the equality in deliberative processes that is the core of democracy. Microtargeted messages are not part of this deliberation,¹⁸² leading to questions about whether it is acceptable to allow focusing on specific segments of the population.¹⁸³

While the discussion above would allow concluding that microtargeting citizens seem to negatively impact citizen values, several counterarguments cannot be omitted from this analysis. In this regard, political microtargeting may, in fact, increase citizen engagement, enhancing the autonomy of citizens that were not reached by legacy media

¹⁷⁸ Jonathan Zittrain, ‘Engineering an Election’ (2013) 127 *Harvard Law Review Forum* 335, 341; Zeynep Tufekci, ‘Engineering the public: Big data, surveillance and computational politics’ (2014) 19(7) *First Monday* <<https://journals.uic.edu/ojs/index.php/fm/article/view/4901/4097>> accessed 11 August 2023.

¹⁷⁹ According to Cohen, the principle of political equality for democracy has three components: equal rights of participation (e.g., rights of voting, right to express themselves), a strong presumption in favour of equally weighted votes, and equal opportunities for effective political influence. See: Joshua Cohen, ‘Money, Politics, Political Equality Joshua Cohen’ in Alex Byrne, Robert C Stalnaker and Ralph Wedgwood (eds) *Fact and value, essays on ethics and metaphysics for Judith Jarvis Thomson* (MIT Press 2001) 49.

¹⁸⁰ Maja Brkan, ‘EU fundamental rights and democracy implications of data-driven political campaigns’ (2020) 27(6) *Maastricht Journal of European and Comparative Law* 774, 782.

¹⁸¹ Bayer (n 5), 17.

¹⁸² Brkan (n 180), 782: “If deliberation is the core tenet of the value of democracy, this value might be threatened if some (targeted) messages, displayed only to a handful of voters, do not form part of this debate. From this, Habermasian perspective, democratic decisions are legitimate only if ‘all citizens are free to deliberate and reason with each other about policy’. Data-driven political campaigns can therefore have a major impact on the value of democracy”.

¹⁸³ Dommert (n 54), 11: These developments have raised important questions about the inclusivity of campaign messaging and the degree to which it is acceptable to focus on specific segments of the population. Indeed, some have highlighted risks relating to mis-targeting and privacy. However, as detailed above, there are questions about the extent to which campaigns are sending highly targeted messages.

and who were thus previously excluded from the political discourse.¹⁸⁴ In turn, this may incentivise deliberate discussion and increase the sense of equality of participation.¹⁸⁵ Furthermore, political microtargeting could “reinforce group identities and solidarity, mobilise partisans, and further the clash of political values”, which could be seen as supporting democratic discourse.¹⁸⁶

While one cannot conclude that political microtargeting is always harmful, it poses a clear threat to personal autonomy and equality – values that are fundamental to open and democratic societies, based on the rule of law – and therefore should at the very least be highly scrutinised. This is the fundamentally normative position of this article, which is also reflected in EU’s regulatory response to political microtargeting, specifically the tightening of rules for political ads, increased transparency obligations and ongoing discussions about prohibiting these practices.¹⁸⁷ On a more abstract level, in the context of the power of big technology companies and the risks that power poses to political freedom as exemplified by political microtargeting, European competition law also needs to be applied in a way that promotes public values, extending beyond purely market-oriented interpretation. These normative positions will form the basis for further analysis of the role for European competition law in addressing political microtargeting effects.

4. European Competition Law and Political Microtargeting: Revisiting the Fundamentals

In the context of the power of big technology companies, political microtargeting brings a plethora of challenges to regulators: those related to safeguarding citizen values and in turn the integrity of electoral processes and open and democratic societies. The

¹⁸⁴ Anstead (n 43), 33.

¹⁸⁵ Bayer (n 5), 17. There is ample of research and discussion on how social media engagement enhances democracy. For example, it could be exceptionally effective in transmitting useful messages to citizens on healthy living, safe driving, and other social values with which it can greatly benefit society. In this perspective, data-driven political micro-targeting has the potential to increase the level of political literacy and the functioning of deliberative democracy, by incentivising deliberative discussion among those voters who are interested and who feel involved. See: Sunstein (n 85); Bakir (n 33), 4: “Such efforts could be democratically lauded for increasing voter engagement and turnout and making political campaigners more responsive to what voters care about.”

¹⁸⁶ Kreiss (n 3), 11: “These things are all suspect from the perspective of the powerful and potent “folk theory” of democracy, as Achen and Bartels phrase it. As these realists argue, however, it’s far better to grapple with the reality of group-based democracy, with its attendant ingrained social allegiances and conflicts over values and power, rather than wishing for a transcendent and pure form of democracy without politics. These authors argue that we need to make peace with conflictual and competitive forms of group-based and pluralistic democracy premised on institutionally organised opposition.”

¹⁸⁷ Digital Services Act (n 45); Proposal for Regulation on Political Advertising (n 18); European Democracy Action Plan (n 58).

(proposed) solutions come in different forms, and this contribution deviates from existing literature by examining the boundaries of European competition law in relation to the harms of political microtargeting. It falls within the broader debate concerning the nexus between competition law and democracy, which in this article is explored through the tension between economic freedom and political freedom, and the values of autonomy and equality, which are required for political freedom to fully materialise. This section will assess the (potential) role of European competition law as part of the broader EU's regulatory landscape for regulating political microtargeting. Ultimately, it will build towards answering the main research question whether European competition law can and should be used to combat the negative effects of political microtargeting.

4.1. Political Microtargeting: A Multifaceted Legal Response to a Multifaceted Phenomenon

In modern political campaigning, digital platforms are perceived to pose risks to democratic processes, as in the political domain they *de facto* act as public actors, whose public power is not legitimised by the law or the public.¹⁸⁸ Cambridge Analytica, among other scandals, raised the momentum for increased regulatory scrutiny to mitigate the risks that digital platforms pose to democratic processes and discourses. Against this backdrop, the EU's regulatory landscape in regard to political microtargeting is evolving too. When it comes to the potential role for European competition law, this article does not posit that it is ought to substitute regulation but rather that it may be a complement to these regulatory instruments.

Recent legislative initiatives set-off by the European Democracy Action Plan reflect the goals of strengthening European democratic ideals in the digital domain.¹⁸⁹ Online political advertising, which encompasses political microtargeting, received significant attention from the policymakers. The (proposed) solutions predominantly focus on increasing transparency of political advertising processes to, in turn, increase accountability of digital platforms.¹⁹⁰ For instance, the Digital Services Act introduced asymmetric due diligence obligations for online intermediaries, covering targeted advertising – the bigger the platform, the greater potential for the harm is identified.¹⁹¹ Furthermore, a proposal for harmonisation of transparency and targeting of political

¹⁸⁸ Linnet Taylor, 'Public actors without public values: legitimacy, domination and the regulation of the technology sector' (2021) 34(4) *Philosophy & Technology* 897.

¹⁸⁹ European Democracy Action Plan (n 58).

¹⁹⁰ On the limits of mandated disclosure see: Carl E Schneider and Omri Ben-Shahar, *More than you wanted to know: The failure of mandated disclosure* (Princeton University Press 2014); Also, there is a need for nuance and understanding the precision of different types of microtargeting. See: Bennett and Gordon (n 35), 50.

¹⁹¹ Caroline Cauffman and Catalina Goanta, 'A new order: the digital services act and consumer protection' (2021) 12(4) *European Journal of Risk Regulation* 758, 774.

ads attempts to mitigate the risks by requiring specific labelling of targeted political ads, indicating not only that they contain sponsored content, but also that they are based on profiling of voters.¹⁹²

Regulation of political microtargeting in the EU encounters a number of tensions, which stem from the lack of European competences, absence of standardisation regarding regulating political advertising across Member States and, fundamentally, the need to balance possible interventions with safeguarding freedom of expression.¹⁹³ When it comes to big technology companies, self-regulation and co-regulation have been important in responding to challenges and tensions that have arisen in relation to political microtargeting. Generally, the rules these companies set extend beyond what is prescribed by the law.¹⁹⁴ Other relevant regulatory responses include privacy and data protection rules,¹⁹⁵ rules in relation political campaigning, funding and lobbying,¹⁹⁶ intermediary liability, audio-visual media (services) law and even criminal law provisions related to cybersecurity.¹⁹⁷

It is outside the scope of this article to explore the intricacies of these legal regimes in depth. However, it is important to underline that despite the emergent regulations relevant to political microtargeting, *competition law* may be considered as an alternative

¹⁹² Proposal for Regulation on Political Advertising (n 18).

¹⁹³ European Data Protection Supervisor (EDPS), 'EDPS Opinions on the Digital Services Act and the Digital Markets Act' (Press Release, 10 February 2021) <https://edps.europa.eu/system/files/2021-02/edps-2021-01-opinion-on-digital-services-act-package_en.pdf> accessed 11 August 2023; Van Hoboken and others (n 17); Van Drunen and others (n 18), 199.

¹⁹⁴ For instance, consider the measures that came as a tech industry's response to the increased regulatory and public pressure resulting from the Cambridge Analytica scandal. In 2019, Twitter decided to ban all political advertising from its platform and Google limited its offerings to political targeting based on more general categories, such as geographic location, age, gender, and contextual targeting options. Meta, on the other hand, did not significantly change their policies until recently. These divergent approaches to political microtargeting is an example of one, among other, limitations of self-regulatory regimes. See: Robert Gorwa, 'What is platform governance?' (2019) 22(6) *Information Communication Society* 854, 871; on a push towards more state regulation, see: Terry Flew and Rosalie Gillett, 'Platform policy: evaluating different responses to the challenges of platform power' (2021) 12(2) *Journal of Digital Media & Policy* 231, 246; 'Political content', Google Advertising Policies Help <<https://support.google.com/adspolicy/answer/6014595?hl=en>> accessed 11 August 2023; Craig Timberg, 'Facebook limits some political ad targeting, but impact is unlikely to be great' (*The Washington Post*, 9 November 2021) <<https://www.washingtonpost.com/nation/2021/11/09/facebook-ads-politics-microtargeting/>> accessed 11 August 2023; 'Ads about social issues, elections or politics', Meta Transparency Center <https://www.facebook.com/policies/ads/restricted_content/political> accessed 11 August 2023; Robert Baldwin, Martin Cave and Martin Lodge, 'Self-regulation, Meta-regulation, and Regulatory Networks' in Robert Baldwin, Martin Cave and Martin Lodge (eds) *Understanding regulation: theory, strategy, and practice* (2nd edn, Oxford University Press 2012).

¹⁹⁵ Van Hoboken and others (n 17), 5-6.

¹⁹⁶ European Parliament resolution of 11 November 2021 on the application of Regulation (EU, Euratom) No 1141/2014 on the statute and funding of European political parties and European political foundations [2021] 2021/2018(INI).

¹⁹⁷ Van Hoboken and others (n 17).

legal avenue when its threats to democratic processes stem from the power of market entities. This is because the multifaceted phenomenon of political microtargeting requires a multifaceted legal response, which would address the different aspects of political microtargeting that contribute to the relevant harms.

Competition rules are generally applicable to all markets – including political advertising markets - unless explicit exceptions are made.¹⁹⁸ The EU takes a favourable approach to concurrent application of competition law and regulation since they not only follow different legal logic but may also serve different goals. Despite the complex relationship, the two are viewed more as complements than substitutes.¹⁹⁹ This is particularly true in highly dynamic and innovative markets, such as digital advertising.²⁰⁰ Therefore, considering the position of big technology companies such as Google and Meta within the political advertising data value chain (as explained above), it is useful to reflect on the potential role for European competition law in the policymaker's toolkit in addressing the harms of political microtargeting.

The main research question of whether European competition law *can* and *should* be used to combat the negative effects of political microtargeting can be viewed through two conceptual lenses: (1) its current economic efficiencies-oriented enforcement priorities and (2) the normative position that in light of the challenges brought by the dynamics of the digital markets and the rise of big technology companies as private actors that exercise public power, the tension between economic freedom and political freedom justifies recalibration of European competition law to contribute to upholding democratic values upon which the EU legal system is based. The next sub-sections will examine each of these perspectives in turn.

4.2. Applying Abuse of Dominance Prohibition to Political Microtargeting

As discussed in section 2.1., since the modernisation period, European competition law enforcement is largely informed by neo-classical economic theories.²⁰¹ In this paradigm, the market sphere is neatly separated from non-market sphere, competition law is not perceived as a viable instrument for concerns that extend beyond the harm to the

¹⁹⁸ Niamh Dunne, *Competition law and economic regulation: making and managing markets* (Cambridge University Press 2015).

¹⁹⁹ OECD, 'Competition Enforcement and Regulatory Alternatives' (2021) 12 <<https://www.oecd.org/daf/competition/competition-enforcement-and-regulatory-alternatives-2021.pdf>> accessed 7 August 2023.

²⁰⁰ Peter Alexiadis and Martin Cave, 'Regulation and competition law in telecommunications and other network industries' in Robert Baldwin, Martin Cave and Martin Lodge (eds) *The Oxford Handbook of Regulation* (Oxford University Press 2010).

²⁰¹ Note, relevant here is also to acknowledge that historically the overarching imperative of the EC was market integration, which afforded very limited competences to go beyond the economic domain and had an impact on competition law enforcement. For instance, see: Hatje (n 105).

competitive processes and consumer welfare into the political domain. Therefore, the assessment of whether competition law, considering its current enforcement priorities, *can* deal with the negative effects of political microtargeting on the citizen-values of autonomy and equality leads to a negative answer. In other words, there is no room for enforcement of competition law to political microtargeting ad-campaigns, *unless* the effects on citizen's autonomy and equality are subsumed into anticompetitive effects in digital advertising markets that fit the consumer welfare paradigm.

In this regard, political microtargeting could be assessed as *a means* for a dominant undertaking to engage in anticompetitive behaviour in digital advertising markets, such as exclusionary (self-)favouring behaviour or exploitation. In doing so, it would be necessary to assess the relevant elements of a dominant position and to build a credible theory of harm.

4.2.1. Dominant Position

In building an abuse of dominance case, the first step requires establishing that an undertaking in question holds a dominant position in a specific relevant market under investigation. The relevant market is a tool used to identify and define the boundaries of competition between companies.²⁰² It is established by the combination of the product and geographic markets, considering the main competitive constraints to which firms are subject to: demand substitutability, supply substitutability and potential competition.²⁰³ The hypothetical monopolist test is also used to define the relevant market and is based on a small but significant non-transitory increase in price (SSNIP). After defining the relevant market, the analysis shifts towards evaluating the competitive constraints and undertaking's position in it, which requires considering an undertaking's market shares and additional economic factors, including pricing structures, earnings, vertical integration and barriers to entry and expansion.²⁰⁴ In the enforcement practice, relevant markets tend to be defined narrowly.²⁰⁵

Against the backdrop of the digital transition and the characteristics of digital markets, including digital advertising markets, the traditional tools and ways for defining

²⁰² Case 6-72 *Europemballage Corporation and Continental Can Company Inc. v Commission of the European Communities* [1973] ECLI:EU:C:1973:22; C 372/5, Commission, 'Commission Notice on the definition of relevant market for the purposes of Community competition law' (Notice) OJ 372/5, para 2.

²⁰³ *Continental Can* (n 202), paras 9 and 13.

²⁰⁴ Case 85/76 *Hoffmann-LaRoche v Commission* [1979] ECLI:EU:C:1979:36, para 39; Case 62/86 *AKZO v Commission* [1991] ECLI:EU:C:1991:286, para 60: >50% market share leads to the presumption of dominance; Case T-30/89 *Hilti v Commission* [1991] ECLI:EU:T:1991:70, para 92: >70% market share points to a clear indication of dominance.

²⁰⁵ Viktoria HSE Robertson, 'A New Era for Antitrust Market Definition' (2021) *Concurrences Review* N° 1-2021 84, 85.

dominance has come under close scrutiny;²⁰⁶ some have questioned the very purpose of a relevant market definition.²⁰⁷ With the progression of the scholarly debate and the changing enforcement practice, in April 2020 the Commission launched the evaluation of the *Market Definition Notice (1997)* to reflect “the developments of the past twenty years, in particular digitalisation and new ways of offering goods and services, and to reflect the increasingly interconnected globalised nature of commercial exchanges”.²⁰⁸ In November 2022, the *Draft Market Definition Notice (2022)* was presented for feedback.²⁰⁹ The draft notice includes reference and/or explanations to several issues that were particularly contentious in the context of digital markets, including greater emphasis on non-price parameters of competition (e.g., innovation and quality), multi-sided markets and ecosystems as well as specific guidance to delineating relevant markets in personalised pricing context.²¹⁰

Circling back to political microtargeting, the assessment of dominance would generally be related to digital advertising markets that form the critical infrastructure for microtargeted messages to reach voters. As discussed throughout this article, Google and Meta are the main players in these markets, not only because of the state of the art digital advertising tools’ offerings, but also because they can deliver microtargeted messages in a large-scale, systemic manner. However, the dominance assessment in this regard is not a straightforward process. The point of contention in determining whether Google and Meta hold a dominant position in digital advertising markets would

²⁰⁶ Commission, ‘Executive Summary of the Evaluation of the Commission Notice on the Definition of Relevant Market for the Purposes of Community Competition Law of 9 December 1997’ SWD (2021) 200 final.

²⁰⁷ Louis Kaplow, ‘Why (Ever) Define Markets?’ (2010) 124 *Harvard Law Review* 437, 517.

²⁰⁸ Commission, ‘A competition policy fit for new challenges’ (Communication) COM (2021) 713 final, 7; On the changing enforcement practice, see the assessment of the relevant market in *Google Android*, where the Commission considered non-licensable operating systems to belong to a separate market from licensable ones. In the decision-making process, the Commission relied on non-conventional market indicators such as small but significant non-transitory decrease in quality (SSNDQ), user loyalty and switching costs. See: *Google Android* (Case AT.40099) Commission Decision C(2018) 4761 final [2019] OJ C402/19, para 139; Case T-604/18 *Google and Alphabet v Commission (Google Android)* [2022] ECLI:EU:T:2022:541. See discussion in: Viktorija Morozovaite, ‘The future of anticompetitive self-preferencing: analysis of hypernudging by voice assistants under article 102 TFEU’ (2023) 19(3) *European Competition Journal* 410, 421-422; Viktoria HSE Robertson and Magali Eben, ‘The Relevant Market Concept in Competition Law and Its Application to Digital Markets: A Comparative Analysis of the EU, US, and Brazil’ (2021) Graz Law Working Paper No 01-2021; Daniel Mandrescu, ‘Applying (EU) competition law to online platforms: reflections on definition of the relevant market’ (2018) 41(3) *World Competition: Law and Economics Review* 1.

²⁰⁹ Commission, ‘Commission Notice on the definition of the relevant market for the purposes of Union competition law’ (Draft of 8 November 2022).

²¹⁰ *Ibid*, paras 88, 94-103; Magali Eben, ‘The draft revised market definition notice: The European Commission brings the relevant market further into the 21st century’ (Kluwer Competition Law Blog, 26 January 2023) < <https://competitionlawblog.kluwercompetitionlaw.com/2023/01/26/the-draft-revised-market-definition-notice-the-european-commission-brings-the-relevant-market-further-into-the-21st-century/> > accessed 12 August 2023.

Viktoria HSE Robertson, ‘Algorithmic pricing: A competition law perspective on personalised prices’ (2023) Graz Working Paper Series No.08-2023.

depend on whether their digital advertising services can be sufficiently differentiated from each other to form separate relevant markets.

Nevertheless, in defining relevant markets, a choice can also be made not to focus the assessment on the specific products and services that form the digital advertising value chain (e.g., search advertising services, display advertising services) but to consider each digital advertising ecosystem as a whole.²¹¹ The latter – an ecosystem perspective – would be favoured in order to capture the full extent of the power of these companies in political microtargeting processes as well as competitive restraints that are at play, and would more likely lead to finding Meta and Google each holding a dominant position within their respective platform ecosystems. When it comes to the *Draft Market Definition Notice (2022)*, it states that when defining relevant product market in the context of platform ecosystems, the Commission may apply similar principles to the ones applied to after markets or assess the secondary (digital) products offered as a bundle to constitute a relevant market on its own.²¹² Furthermore, the Commission may “take into account elements such as network effects, switching costs and (single and/or multi)-homing decisions for the purpose of defining the relevant product market(s).”²¹³ While the draft notice provides a step in a positive direction in capturing markets for digital ecosystems, it is less certain that the new notice will sufficiently account for the complexities of the multi-layered multi-actor platform ecosystems of big technology companies, including digital advertising ecosystems.

4.2.2. Theory of Harm

If for the purposes of this article it is presumed that Google and Meta’s dominance can be found, the next step in the assessment requires establishing that there is an abusive conduct. This is because article 102 TFEU does not prohibit dominance or “corporate bigness” as such. Instead, undertakings hold a special responsibility not to abuse their dominant position.²¹⁴ The provision encompasses a non-exhaustive list of abusive conduct, meaning that the enforcement and judicial authorities are able to expand this list.²¹⁵ Furthermore, a decisive factor in finding article 102 TFEU infringement

²¹¹ Platform ecosystem perspective has been considered in the recent Draft Market Definition Notice. See: Commission (n 209), para 103.

²¹² Ibid. On principles applied to aftermarket see para 100: “There are three possible ways to define relevant product markets in the case of primary and secondary products, namely: (i) as a system market comprising both the primary and the secondary product; (ii) as multiple markets, namely a market for the primary product and separate markets for the secondary products associated with each brand of the primary product; or (iii) as dual markets, namely the market for the primary product on the one hand and the market for the secondary product on the other hand.”

²¹³ Ibid, para 103.

²¹⁴ Case C 322/81 *Michelin v EC Commission* [1983] ECR 3461, para 57.

²¹⁵ For instance, in the recent Google Search (Shopping) judgement, the Court for the first time confirmed that self-preferencing can constitute an independent type of abuse.

relates to establishing a credible theory of harm, which demonstrates how a dominant undertaking's behaviour distorts competition.²¹⁶

In the context of political microtargeting, there is an argument to be made that the harm to the (political) values of autonomy and equality could be indirectly incorporated into a more neo-classical economics-based theory of harm relating to economic efficiencies, through lowering the quality of ads or overall user experience, and/or limiting choice.

When it comes to the quality parameters, the relevancy of ads could be seen as welfare-enhancing because it may lessen the risk of the paradox of choice²¹⁷ and in turn provide voters with information that is relevant to them,²¹⁸ mobilise citizen population that would not have voted otherwise,²¹⁹ and allow political parties to engage in a legitimate competition on the marketplace of ideas.²²⁰ However, the line between legitimate and problematic is thin in this context. This is because under conditions where a platform follows clickthrough-driven motivations, relevance and susceptibility become indistinguishable. For instance, a marketing study advised cosmetic companies to target women during their most vulnerable moments such as Monday mornings, when they feel less attractive. Therefore, the intent behind relevance matters too.²²¹ Taking this argument, a step further, once microtargeted political messages are designed to manipulate or even deceive, they could be considered as inherently lower in quality.²²²

Moreover, as political messages are targeted in a hyper-personalised manner, according to users' specific characteristics and circumstances, there is a risk that adopted behavioural mechanisms would lead to *de facto* limitation of meaningful choice as well as decreased serendipity as part of quality of users experience of accessing the public sphere.²²³

While the above provides a blueprint for developing a theory of harm, in practice, it would bring formidable challenges. As discussed earlier, despite the power of big technology companies shifting from the economic to the political domain, also in

²¹⁶ Hans Zenger and Mike Walker, 'Theories of harm in European competition law: A progress report' in Jacques Bourgeois and Denis Waelbroeck (eds) *Ten Years of Effects-based Approach in EU Competition Law* (Bruylant 2012).

²¹⁷ Adi Ayal, 'Harmful freedom of choice: Lessons from the cellphone market' (2011) 74(2) *Law And Contemporary Problems* 91, 94; Barry Schwartz and Andrew Ward, 'Doing better but feeling worse: The paradox of choice' (2004) *Positive psychology in practice* 86.

²¹⁸ Schäwel, Frener and Trepte (n 6), 159.

²¹⁹ Chester and Montgomery (n 33), 7; Anstead (n 43), 33.

²²⁰ Martin Morlok, 'Party Law as Competition Law' (2008) 2(3) *Legisprudence* 173, 216.

²²¹ Marc Faddoul, Rohan Kapuria and Lily Lin, 'Sniper Ad Targeting, Final Report' (2019) 6 <https://www.ischool.berkeley.edu/sites/default/files/sproject_attachments/sniper_ad_targeting_final_report.pdf> accessed 11 August 2013.

²²² Mason Marks, 'Biosupremacy: big data, antitrust and monopolistic power over human behavior' (2021) 55(1) *UC Davis Law Review* 513, 578; see also: Ezrachi and Stucke, (n 13), 197.

²²³ Sunstein (n 85).

the context of political microtargeting, the majority of harms related to democratic processes exist independently of their impact on welfare. Therefore, in assessing the negative effects of political microtargeting while adopting neo-classical economic tools, one requires fitting incommensurable democratic values into economic metrics. In this regard, it not only becomes quantifiably difficult to demonstrate harms but also the focus is shifted from the primary effects of political microtargeting on democratic processes and discourses, to narrowly construed efficiency considerations.

An alternative way of assessing the role that European competition law *should* play in combatting the negative effects of political microtargeting, such as harms to citizen values of autonomy and equality, is through adopting a normative position that European competition law and policy should be developed in line with the view of the digital economy, in which fundamental democratic values are upheld. This requires going back to the fundamentals of the European competition law, and in the context of this article, revisiting the nexus between competition law and democracy. This question has broader implications since it encompasses the contemporary issues raised by digitalisation of markets and envisioning how to deal with private infrastructures that are emerging as a basis of our political, social and private interactions online.

4.3. Reconfiguring the Boundaries of European Competition Law?

As discussed earlier, the EU and its Member States are based on the tenets of liberal democracy and the rule of law and are committed to protecting public values and fundamental rights through a strong legal framework. European competition law and its goals, therefore, are understood in light of the EU's constitutional identity.

Against this background, the notions of economic freedom and political freedom are inextricably linked.²²⁴ The economic freedom of market actors is shaped by the economic constitutional framework, which safeguards the process of competition from distortion and allows for a limited state intervention into the economic domain.²²⁵ However, the extent of economic freedom can be influenced and limited by public and social considerations, which shape the overarching EU's constitutional set-up. Coming back to the Ordoliberal theory as one of the sources of normative underpinnings of European competition law, it is further relevant to consider its view that private (economic) and public (state) power are forces that should be balanced.²²⁶

²²⁴ Yi Feng, *Democracy, Governance And Economic Performance: Theory and Evidence* (MIT Press 2005). The books included statistical results that showed that political freedom, at least indirectly, affects economic freedom and growth, but not the other way round.

²²⁵ *Ibid.*, 707.

²²⁶ Vatiello (n 122), 689.

Considering the challenges raised by digitalisation, in particular, the rise of big technology companies as powerful corporate structures with manifestation of their power leading to negative effects on the political domain, the balance between economic freedom and political freedom seems to be tilted in favour of the former. After all, the digital market dynamics are based on the commodification of users' time, attention, and ultimately data. By the same token, in the context of political microtargeting, big technology companies have no incentive to differentiate between different roles *users* undertake online (in simplified view, as consumers and citizens) – the mechanisms of engagement remain the same. Thus, it is precisely because big technology companies treat citizens as consumers, the effects on the citizen values might be considered relevant for European competition law too.

To echo the preceding discussion, the following sub-sections will revisit the concepts of dominance and theory of harm, which serve as junctures for the potential expansion of the boundaries of European competition law to incorporate concerns related to democratic processes. This requires exploring the nexus between European competition law and democracy, through the tension between economic freedom and political freedom, as well as the values of autonomy and equality, which are required for political freedom to fully materialise.

4.3.1. Dominance beyond Market Power of Big Tech

In light of the discussion on Modern Bigness, there is an argument to be made that the *market power* paradigm is no longer fit for purpose when it comes to grasping the composite power of big technology companies.²²⁷ When observing the entwined effects of manifestations of this power and how they play out in the economic, social, political and personal domains, insulation of European competition law from non-market considerations seems untenable.

In regard to the political microtargeting example, as explained in more detail above, considering that Google and Meta are the key players controlling information flows as well as digital advertising infrastructures, it becomes clear that microtargeting would not happen to the extent, in the scale and precision, which is possible because of these companies' services. Furthermore, the political microtargeting effects on democratic processes and discourses are inherently tied to the financial incentives that are part of digital platforms' business models and strategies, that tend to favour

²²⁷ Gerbrandy and Phoa (n 8).

profit maximisation and market logic over public values.²²⁸ The opaqueness of the mechanisms that facilitate political microtargeting in itself go against the democratic principles of openness, which is in stark juxtaposition to profit-making logic. However, these companies play an active role in democratic processes and discourses, which transcends any individual political campaign.

Considering the intricate interdependencies between market and non-market-related character of big technology companies, the narrowly construed notion of “dominance” may need to be expanded to incorporate the composite elements of their power. This requires acknowledging not only the role these companies play in their respective platform ecosystems, but also the broader societal significance through shaping social and political institutions.

To date, there is a growing body of literature examining and describing the power of big technology companies as well as the manifestations and effects of that power in specific domains, including the political domain.²²⁹ However, the research and empirical studies that comprehensively address and connect the different strands of literature to build towards a more composite notion of power is scarce.²³⁰ The first step, therefore, necessitates creating and using a new vocabulary that captures the power dynamics that occur in digital markets, drawing upon existing knowledge and interdisciplinary collaboration.²³¹ Such a composite notion of power would also lead to concluding that in the context of political microtargeting processes, Google and Meta hold very powerful positions.

4.3.2. Harm beyond Consumer Welfare

The EU takes a normative direction towards an open and democratic society, based on the rule of law, where public values and fundamental rights are protected. This normative frame necessitates a vibrant and transparent public sphere, where citizens enjoy their political freedoms on an equal basis. When considering whether the negative effects of political microtargeting on citizens’ autonomy and equality could lead to harm relevant to European competition law, an alternative approach could consider the impact on democratic processes a sufficient theory of harm *in itself*. In this regard,

²²⁸ However, favouring most engaging/enticing content is not always the case. See a recent example of the Ukraine-Russia war demonstrates companies blocking Russian media: Shannon Bond, ‘Facebook and TikTok block Russian state media in Europe’ (*NPR*, 28 February 2022) <<https://www.npr.org/2022/02/28/1083633239/facebook-and-tiktok-block-russian-state-media-in-europe?t=1647887717194>> accessed 11 August 2023.

²²⁹ A reference could even be made to the criterion established in the DMA and the DSA, as specific to these legal instruments in digital sector and content moderation area respectively.

²³⁰ Gerbrandy and Phoa (n 8).

²³¹ *Ibid*.

democratic concerns trump efficiency concerns, or even welfare gains, associated with political microtargeting practices.

For the purposes of this argument, moving away from consumer welfare standard would require adopting a broader conceptual tool to identify relevant harms. A useful notion to be explored in this regard concerns “citizen’s welfare standard”, which takes into account the impact of competition for all citizens and their wellbeing.²³² It requires considering citizen’s interest in issues that are important for citizen well-being, including *inter alia* democracy, sustainability and media plurality.²³³ Therefore, in applying citizen welfare standard, it would be possible to look at how an undertaking’s conduct in question affects citizens as a holistic group, instead of fixating on the narrow category of consumers.²³⁴

Conceptually related to the citizen welfare standard is the proposition for polycentric competition law, which takes into account dimensions of competition that can extend beyond the economic domain, recognising the complexity of interdependent relationships in the polycentric problems which could include the power dynamics that play out in digital markets.²³⁵

Considering the potential breadth of citizen welfare standard, there is a need to establish some limiting principles. In this regard, relevant is the notion of the “special responsibility”.²³⁶ The article 102 TFEU case law has continuously stressed that dominant undertakings have a special responsibility which comes hand in hand with having market power.²³⁷ With increasing degrees of market power, the responsibility

²³² OECD, ‘The Consumer Welfare Standard - Advantages and Disadvantages Compared to Alternative Standards’ (2023) OECD Competition Policy Roundtable Background Note, 16 <www.oecd.org/daf/competition/consumer-welfare-standard-advantages-and-disadvantages-to-alternative-standards-2023.pdf> accessed 14 August 2023; van Dijck, Nieborg and Poell (n 93), 10; Odudu (n 113).

²³³ OECD (n 234), 17; Alternative analysis, related perspective on increasing citizens’ well-being, defined in relation to reference: Maurice E Stucke, ‘Should competition policy promote happiness?’ (2013) 81 *Fordham Law Review* 2575.

²³⁴ Firat Cengiz, ‘The conflict between market competition and worker solidarity: moving from consumer to citizen welfare standard in competition law’ (2020) 41(1) *Legal Studies* 73.

²³⁵ Ioannis Lianos, ‘Polycentric competition law’ (2018) CLES Research Paper Series: 4/2018, 8.

²³⁶ This is not a fundamentally unique proposition. Sauter suggested considering “a duty of care” for digitally dominant undertakings, a proposal with clear parallels with the information fiduciaries concept found in the US debate. See: Wolf Sauter, ‘A duty of care to prevent online exploitation of consumers? Digital dominance and special responsibility in EU competition law’ (2019) 8(2) *Journal of Antitrust Enforcement* 406; Jack M Balkin, ‘Information Fiduciaries and the First Amendment’ (2015) 49 *University of California Davis Law Review* 1183.

²³⁷ *Michelin I* (n 109); *United Brands v Commission* (n 24), para 65; *Hoffmann-La Roche & Co. v Commission* (n 204), para 38.

seems to extend too.²³⁸ The notion is not well-defined and generally refers to the idea that a conduct that is not considered problematic when adopted by non-dominant company could turn abusive if performed by a dominant undertaking.

The theory of Modern Bigness described above implies a significant, yet interdependent, composite power of big technology companies across different market and non-market domains. Therefore, the threshold criteria for finding composite power is expected to be, in fact, high and as such exclude the vast majority of undertakings. This would be the case in the context of the role big technology companies play in political microtargeting processes.

Based on these observations, this contribution does not suggest that European competition law should cover all of the challenges related to political microtargeting. However, as microtargeting processes on the scale and of the precision enabled by big technology companies' infrastructures leads to the negative effects on citizen values of autonomy and equality, thereby undermining political freedom, there is an argument to be made for including competition law in the mosaic of legal regimes tackling these negative effects. Not only because European competition law is an instrument to counter negative effects of private power and these companies are treating citizens as consumers, but also due to the role that competition law plays in relation to shaping open and democratic society, based on the rule of law. This normative frame, while examined in relation to political microtargeting, could help us think about other tensions resulting from the composite power of (some) technology companies that also manifest predominantly outside the market domain.

5. Conclusion

It is long recognised that in the political domain, public opinion is a constructed, manufactured thing, which could be shaped and manipulated by those interested in doing so.²³⁹ Data-driven political microtargeting practices are becoming a staple in modern campaigning, opening up unparalleled opportunities to appeal to individual voters on a large scale. Importantly, its mechanics are oiled by big technology companies' economic imperatives as they are the inescapable facilitators of these practices, in effect treating user-citizens as user-consumers. By the same token, there are no alternative civic or non-commercial infrastructures that allow citizens

²³⁸ In reference to AG Fennelly's statement that super-dominant undertakings have a particularly onerous special responsibility, see: Inge Graef and Sean van Berlo, 'Towards Smarter Regulation in the Areas of Competition, Data Protection and Consumer Law: Why Greater Power Should Come with Greater Responsibility' (2020) 12(3) *European Journal of Risk Regulation* 674.

²³⁹ Walter Lippmann, *Public Opinion: With a New Introduction by Michael Curtis* (Transaction Publishers, 1998); Brian McNair, *Introduction to Political Communication* (6th edn, Taylor & Francis 2018).

to meaningfully engage with the digital public sphere, seamlessly blended in their everyday experience.

This article examined whether European competition law can and should (also) be used to combat the negative effects of political microtargeting. While European competition law is primarily focused on curbing the negative manifestations of market power and protecting consumer welfare, the composite nature of the power of big technology companies necessitates the re-assessment of its bounds. The normative position of this contribution is grounded in the fundamental principles of an open and democratic society, based on the rule of law. At least in the abstract, the nexus between democracy and competition law helps us to draw a thread between this legal instrument and the negative effects of political microtargeting on citizen-values of autonomy and equality. Furthermore, as digital environment uniquely blurs the boundaries between economic, social, personal and political domains as well as the roles that users undertake in each of them, big technology companies have little incentive to treat user-citizens differently than user-consumers. It is recognised that European competition law has inherent limitations in addressing these challenges and other legal instruments may be better suited to deal with specific aspects of harmful political microtargeting. Nevertheless, this article showcased, at least conceptually, the flexibility of the boundaries of European competition law as a complementary tool in this context and teased out further questions in relation to the contemporary digitalisation debate, especially in relation to safeguarding public values.



Chapter 7

Conclusion

1. Introduction

In October 2021, Mark Zuckerberg introduced Meta Platforms Inc. – the rebrand of Facebook into a company geared towards developing the ‘metaverse’, an immersive shared 3D virtual space where users will spend and experience life beyond physical environments. In November 2022, OpenAI released ChatGPT, a generative AI model tool which soon became one of the biggest hypes in the industry, enhancing users’ capabilities to access, create and share digital content and applications.¹ In June 2023, Apple revealed its Vision Pro spatial computer that seamlessly blends digital environments with the physical world.

What the above examples have in common is a clear direction towards users spending more time, attention, and decision-making online. Moreover, the increasingly indispensable infrastructure for these digital activities to take place is to a large extent dominated by a handful of big technology companies that lead in the development of the newest AI tools, in turn continuously strengthening their already inescapable platform ecosystems. With technological developments happening at an accelerated pace, it is important to take a position when it comes to safeguarding shared public values, while fostering innovative digital markets, and detailing what that means in practice. This requires striking a delicate balance between on the one hand the economic freedom of market actors and, on the other, the public values, including fundamental rights and freedoms, that are foundational to our society.

In this dissertation, I defined and examined the phenomenon of hypernudging – “dynamically personalised steering”, characterised by hyper-personalisation, multidimensionality and adaptability to different user interfaces. Against the background of the power of big technology companies and their prominent role in shaping economic and societal structures, it zoomed in on the potential role of European competition law in addressing multifaceted hypernudging harms. To provide a comprehensive and meaningful answer to examining this role, the research further explored hypernudging in the broader context of the EU’s emergent digital policy, which includes regulatory instruments that cover it directly or indirectly.

¹ It is important to note the role of big technology companies in the development and deployment of the Large Language Models and in turn AI-powered chatbots. While OpenAI is a non-profit company, its commercial branch that operates ChatGPT is predominantly funded by Microsoft. A rising competitor to ChatGPT is Alphabet-owned Bard. See: ‘Microsoft confirms its \$10 billion investment into ChatGPT, changing how Microsoft competes with Google, Apple and other Tech Giants’ (*Forbes*, 27 January 2023) <<https://www.forbes.com/sites/qai/2023/01/27/microsoft-confirms-its-10-billion-investment-into-chatgpt-changing-how-microsoft-competes-with-google-apple-and-other-tech-giants/?sh=6beddf413624>> accessed 23 August 2023.

The **research sub-questions** set out in the introduction are mainly answered in the articles that form the core chapters (and corresponding articles) of this dissertation, with chapter 3 providing the normative grounding for sub-question 4:

1. How can hypernudging processes be defined in their multiple aspects?
2. What are the market and non-market effects of hypernudging, and which harms do they lead to?
3. When do hypernudging processes fall under the scope of European competition law?
4. To what extent should European competition law address the market and non-market effects of hypernudging?

In this concluding chapter, I reflect on the key findings and contributions of this dissertation, emphasising the significance of the research conducted. The original contributions can be distilled to three distinct, yet interrelated, topics: user influencing and deceptive design (section 2), European competition law (section 3), and EU digital policy (section 4), each with conclusions respectively addressing stakeholders from academia, industry, legal practice, regulatory authorities, and policymakers. Finally, by reflecting on the implications of these findings to European competition law and the broader EU digital policy development, I address the main normative concern with regards to the main research question (section 5):

What is the role that European competition law ought to play in addressing the challenges of hypernudging by big technology companies?

7

2. Teasing Out the Spectrum of Influence

The hypernudging phenomenon can be viewed as one of the most sophisticated user-influencing practices online. As explained in chapter 2, which set out to answer the 1st and, partially, 2nd research sub-questions, the term marries insights from psychology and behavioural science with complex AI and ML algorithms leading to dynamically personalised steering. Importantly, hypernudging is not merely a single design element found in digital choice environments, but a system of elements working in concert to guide a user towards specific pre-determined outcomes. These processes may take different forms, and as demonstrated throughout chapters 4, 5 and 6, they may occur on different user interfaces.

Chapter 2 introduced a hypernudging framework, which consolidated existing relevant literatures into cumulative criteria to characterise and identify hypernudging processes in practice. Specifically, the framework builds upon insights from behavioural economics and Thaler and Sunstein's conceptualisation of the nudge theory, digital nudging literature as understood in the Human-Computer Interaction (HCI literature,

and the unique elements of hypernudging described in interdisciplinary law and informatics perspectives. Thus, it reveals that hypernudging processes share significant conceptual overlaps with other user influencing practices, such as digital nudging and dark patterns. However, focusing on the concept of hypernudging provided a novel conceptual lens to examine an advanced version of these practices, that at the beginning of the research period were underdeveloped in the literature.

2.1. The Challenge of Conceptual Inconsistency

Despite the surging academic and regulatory interest in user influencing and deceptive design, hypernudging processes are rarely addressed or investigated in an explicit manner. One of the main reasons for this is the lack of shared vocabulary in the user influencing debate altogether. When it comes to “hypernudging” specifically, various terms are used to describe similar phenomena, with academia, industry, regulatory authorities, and policymakers showing signs of disconnect. During the research period, I had an opportunity to informally engage with these different stakeholders. The discussions revealed that the concept of “hypernudging” is not well-established, with “AI nudges”, “algorithmic nudges”, “data-driven practices”, “AI manipulation” and “contextual profiling” being some, among other, examples of adopted varying terminology.

Conceptual inconsistency leads to the risk of siloed discourses and fragmented legal thinking when it comes to specific practices and different regulatory fields. This may result in a limited sharing of relevant knowledge on user influencing practices, including on the relevant risks, examples, and effects, and may lead to fragmented, piecemeal policy solutions.

An alternative way to examine distinct, yet overlapping, user influencing practices is through focusing on their shared characteristics and underlying mechanisms. In essence, as touched upon in chapter 2, hypernudging, as well as other user influencing practices, hinge upon the imposition of environmental and cognitive constraints as part of people’s decision-making process. This mechanism requires toying with their external and internal trigger points to achieve pre-determined outcomes. Other characteristics of hypernudging, including personalisation, dynamism, predicative capacity, multi-dimensionality, and alignment with user’s interests, are variable in nature and can be fulfilled by different user influencing practices in different degrees.

In this regard, visualising a spectrum of influence which consists of these variable features is useful in positioning and studying the various practices in relation to one another. Hypernudging processes lie on the farthest end of this spectrum, relative to other user influencing practices already familiar to the stakeholders. The visualisation

below provides a useful way of showing how the relationship and overlaps between hypernudging, (personalised or systemic) dark patterns, and positive digital nudging. It shows how these concepts relate to one another in the expanding user influencing discourses and EU regulatory frameworks.

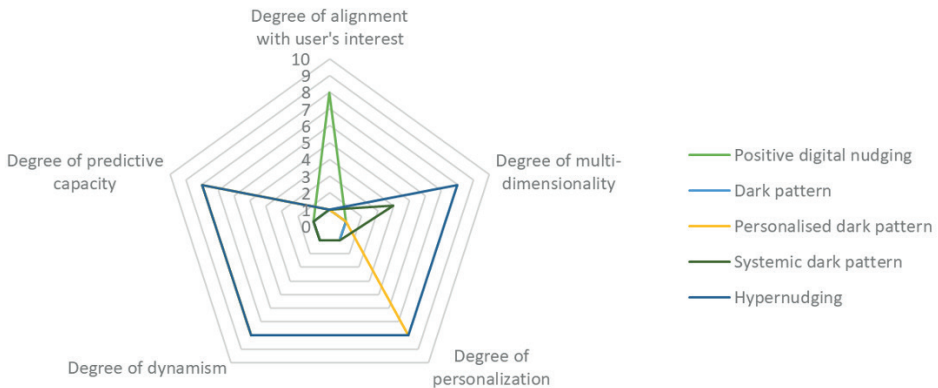


Table 1: Visualisation of the spectrum of influence

2.2. The Reflection on the Concept of “Hypernudging”

Given the conceptual inconsistency that permeates user influencing discourses, it is also necessary to reflect on “hypernudging” as a notion chosen to depict most advanced forms of user steering online. One could argue that introducing yet another term into the mix contributes to the abovementioned challenges further. In response, I acknowledge that the terminology aspect is complex.

On the one hand, hypernudging is a rich concept which allowed me to comprehensively map-out the characteristics of the most advanced user influencing practices online, by grounding the hypernudging framework in the intellectual foundations of behavioural economics, the nudge theory and digital nudging literature. “Hypernudging” as a term, therefore, provides the logical continuity and connection to well-theorised and researched practices.

On the other hand, my thinking about the subject has shifted since the beginning of the research project. In light of the challenges of finding a shared vocabulary, it is necessary to emphasise that the priority should be given to understanding the underlying mechanisms of user influencing and their connections to potential individual and collective harms, instead of narrowing down the focus to specific practices in an isolated way. This is because user influencing discourses are continuously expanding

but have not yet reached the stage of maturity to provide comprehensive taxonomies and overviews of examples and their effects, in particular when it comes to the systemic, dynamically personalised practices. As a result, a broader brushstroke is required in gathering relevant knowledge. This is true for *sharing* knowledge across disciplines as well, which is why chapter 6 (corresponding to the submitted article) uses the term “microtargeting”, explaining how it is a form of political hypernudging. The observation concerning the use of the broader brushstroke in identifying and assessing user influencing online is in line with the EU’s approach to regulating online platforms and their interface design. For instance, according to Article 25(1), DSA:

“Providers of online platforms shall not design, organise or operate their online interfaces in a way that deceives or manipulates the recipients of their service or in a way that otherwise materially distorts or impairs the ability of the recipients of their service to make free and informed decisions”.²

The provision is designed to cast a wide net on various types of user influencing practices and is expected to cover hypernudging, since the definition does not focus on a specific practice, but instead considers online interfaces which employ mechanisms that “deceive”, “manipulate” or “materially distort or impair” users’ ability to make informed decisions for themselves. It is noteworthy that the provision would not be applicable where the GDPR or the UCPD already covers the conduct in question and, as such, Article 25(1) is expected to be heavily litigated, considering that concepts such as “manipulation” are highly elusive and have not been defined in the DSA. While the incorporation of the prohibition signals that deceptive and manipulative digital interfaces are perceived as harmful from the perspective of the EU policymaker, it does not solve conceptual inconsistencies and the lack of understanding of what hypernudging entails in practice, necessitating scholarly and regulatory attention to these issues.

2.3. The Challenge of Problematising the Hypernudging Phenomenon

As a starting point in any policy cycle, the problem definition has implications to further agenda-setting and policy formulation processes.³ Since hypernudging is delivered by complex proprietary AI systems that do not lend themselves to meaningful

² Regulation (EU) 2022/2065 of the European Parliament and of the Council of 19 October 2022 on a Single Market For Digital Services and amending Directive 2000/31/EC (Digital Services Act) [2022] OJ L 277/1, article 25. See also, recitals 83 and 87 related to VLOPs and VLOSs.

³ Falk Daviter, ‘Policy framing in the European Union’ (2007) 14(4) *Journal of European Public Policy* 654, 654; Janet A Weiss, ‘The powers of problem definition: the case of government paper-work’ (1989) 22 *Policy Sciences* 97.

observability, identifying these processes in action, therefore, is a particularly challenging task.⁴ This leads to inherent challenges of mapping out and understanding the prevalence of hypernudging, its different forms and consequences.

To illustrate, consider the data-driven political campaigning by Cambridge Analytica, which was examined in chapter 6. The information regarding political microtargeting – a form of political hypernudging – was derived from the whistle-blowers' accounts about the psychological and technical mechanisms used in the respective campaigning processes. Outsiders, however, have limited capabilities to study the opaque workings of digital platforms and their proprietary algorithmic systems. Even if hypernudging can be successfully identified, discerning the reasoning behind algorithmic results, and demonstrating effectiveness in leading users towards specific behaviour is a challenging task.⁵

Despite the difficulties in problematising hypernudging for policymaking purposes, these practices can be connected to user influencing discourses already familiar to researchers and policymakers. In fact, due to its advanced nature, hypernudging is expected to not only replicate but also magnify harms identified in relation to more overt practices, such as non-personalised dark patterns. Since hypernudging may take various forms, it may lead to multifaceted and diffuse effects on the market sphere, non-market sphere, or both concomitantly.

Chapter 2 concluded that hypernudging plays a part in the evolving EU's regulatory landscape for digital markets, albeit implicitly. The DMA, the DSA and the AI Act include provisions that touch upon the aspects of hypernudging directly or indirectly. Furthermore, pre-existing legal rules seem to be flexible enough to cover some forms of hypernudging implicitly, with the European Data Protection Board (EDPB) and the Commission adjusting their guidance on the GDPR and the Unfair Commercial Practices Directive (UCPD) application to data-driven practices respectively.

In this dissertation, I advance an argument that article 102 TFEU may also be flexible enough to be applied to hypernudging by big technology companies. Drawing upon conclusions from previous chapters, the next section will reiterate that hypernudging may become the *means* for dominant undertakings to engage in anticompetitive leveraging behaviour. However, as hypernudging is multifaceted in nature, it may lead to effects that extend beyond the market domain. In the European competition law

⁴ Bernhard Rieder and Jeanette Hofmann, 'Towards platform observability' (2020) 9(4) *Internet Policy Review* 1.

⁵ Even when it comes to well-researched case study of Cambridge Analytica, the evidence on the actual effects of political microtargeting on voters remains inconclusive.

context, the latter is a point of contention, which requires stepping outside the internal perspective of the law and considering its normative dimensions.

3. Hypernudging as Abuse of Dominance

As a legal field most closely associated with tackling the negative manifestations of market power, European competition law provides a logical yet original lens for addressing hypernudging harms. The dark horse character stems from its current enforcement focus on safeguarding economic efficiencies and consumer welfare, meaning that individual consumer harms, which are strongly connected to user influencing discourses, fall outside the scope of its application. However, by examining different hypernudging examples, I show that once these practices are deployed in a large-scale, systemic manner, collective harms may lead to market distortion relevant to European competition law.

A collective harm perspective is particularly salient in the context of big technology companies, which possess several characteristics that contribute to hypernudging users at scale, with the ability to reinforce its dynamism and multidimensionality features. These characteristics together with the resulting composite power of big technology companies have been comprehensively discussed in Gerbrandy and Phoa's chapter *The Power of Big Corporations as Modern Bigness and a Vocabulary for Shaping Competition Law as Counter-Power*.⁶ For the purposes of this dissertation, the theory of Modern Bigness serves as a contextual background adding "power" as a necessary junction point between hypernudging and European competition law perspective.

Big technology companies form the core of the digital economy.⁷ They "manage markets and infrastructures and leverage data, asymmetry of knowledge and opacity to make money while offering critical services to the public".⁸ The "platform ecosystem" perspective has been repeatedly stressed throughout this dissertation, because it underscores the dual role big technology companies play as both market orchestrators and competitors in downstream markets; they are capable of *de facto*

⁶ Anna Gerbrandy and Pauline Phoa, 'The Power of Big Tech Corporations as Modern Bigness and a Vocabulary for Shaping Competition Law as Counter' in Rutger Claassen, Michael Bennett and Huub Brouwer (eds) *Wealth and Power: Philosophical Perspectives* (Routledge 2022).

⁷ José van Dijck, Thomas Poell, and Martijn de Waal, *The platform society: Public values in a connective world* (Oxford University Press 2018).

⁸ Elettra Bietti, 'Structuring Digital Platform Markets: Antitrust and Utilities' Convergence' (2022) *University of Illinois Law Review* (forthcoming 2024, No.4) 1, 13 <<https://ssrn.com/abstract=4275143>> accessed 10 August 2023.

organising the supply and demand within their respective platform ecosystems.⁹ This creates incentives and capabilities to leverage market power to fortify and expand their respective market positions. Such conduct may manifest as self-favouring behaviour, which leads to “digital market manipulation” that harms consumers and competition through shifting consumer surplus to the dominant undertaking.¹⁰

When assessing hypernudging by big technology companies in light of article 102 TFEU, the first step necessitates establishing that the undertaking in question holds a dominant position in a respective relevant market.¹¹ In this regard, it is notable that the notion of ‘power’ and the legal requirement of ‘dominance’ are not the same. In European competition law, dominance is a narrowly construed concept, with market power being its decisive element. Dominance refers to a company’s “position of economic strength (...) which enables it to prevent effective competition being maintained on the relevant market by giving it the power to behave to an appreciable extent independently of its competitors, customers and ultimately of its consumers”.¹²

In chapters 4 and 5, the hypernudging analysis in relation to the abuse of dominance prohibition was built presuming that the dominance requirement could be met. The examination of Google’s high market shares in the local search advertising market as well as the company’s systemic role in the digital advertising value chain allowed to draw this conclusion in chapter 4. The general purpose voice assistants’ market, examined in chapter 5, is at nascent stages and as such was presumed to develop in a way that would tip in favour of a single provider, or become sufficiently differentiated, for a handful of key market players’ products to constitute their own relevant markets.

In chapter 6, which concerned the role of big technology companies in the political microtargeting processes, establishing a dominant position was less straightforward. After all, how can ‘markets’ be discussed and delineated when it comes to activities relating to the political domain? On the one hand, if political microtargeting can be considered as a practice that takes place on and because of the market sphere, in addition to the public sphere, the relevant market definition and in turn the assessment of dominance would relate to digital advertising markets. As such, dominance may be established through conventional methods of analysis, though not without limitations.

⁹ Patrice Bougette, Oliver Budzinski and Frédéric Marty, ‘Self-preferencing and competitive damages: a focus on exploitative abuses’ (2022) 67(2) *The Antitrust Bulletin* 190, 191; Rupprecht Podszun, ‘Digital ecosystems, decision-making, competition and consumers – on the value of autonomy for competition’ (2019), 2 <<https://ssrn.com/abstract=3420692>> accessed 10 August 2023.

¹⁰ Ryan Calo, ‘Digital market manipulation’ (2013) 82 *The George Washington Law Review* 995.

¹¹ Commission, ‘Notice on the definition of relevant market for the purposes of Community competition law’ [1997].

¹² Case 27/76 *United Brands v Commission* [1979] ECLI:EU:C:1978:22, para 65.

On the other hand, it is in these circumstances that the theory of Modern Bigness becomes particularly salient. Considering that digital conglomerates yield composite power that extends beyond the market domain, characterised by the unmatched pervasiveness, scope, precision, and invasiveness in modern institutions, society and individual lives, the question emerges whether the traditional competition law concept of dominance needs to be recalibrated to capture the power dynamics that occur in digital markets.¹³ Recognising the relevance of the composite notion of power would allow concluding that when it comes to political microtargeting Google and Meta have powerful positions.

Against this backdrop, I examined the circumstances in which hypernudging by big technology companies could become a vehicle for dominant undertakings to engage in anticompetitive behaviour. In doing so (in chapters 4 and 5), I note that hypernudging does not necessarily have to be considered a specific or novel type of abuse, but a means for conduct which falls under an existing theory of harm to take place. I moved beyond these existing theories of harm, and beyond the internal perspective of the law (see chapter 3), and placed hypernudging processes in the broader context of the EU's digital transition and the evolving digital policy agenda for regulating digital markets (in chapter 6). As the EU is articulating a clear normative position of moving towards a digital economy, which prioritises citizens' rights and public values, it is necessary to reflect on how European competition law and policy can be operationalised in line with these overarching goals.

3.1. Exclusionary Abuse

Chapters 4 and 5 of this dissertation focused on exclusionary abuses, in particular leveraging behaviour, where firms with significant market power employ intermediation bias to favour their own or partners' products or services on downstream markets.

In chapter 4, I explicitly applied the hypernudging criteria to local search advertising on Google Maps and multi-channel integrated advertising campaigns, emphasising the inherent link between the advertiser- and the user-sides of the multi-sided digital advertising markets. Digital advertising has developed into a complex and opaque ecosystem with multiple interdependent actors spanning across its value chain. Google is a systemic actor in each layer of this chain, with "one-stop-shop" type of service offerings to advertisers and users. On the user-facing side of the business, such as Google Maps, the company is a dominant digital navigation service provider. The chapter ultimately hinged on the premise that Google is well-positioned to shape and direct market actors' interactions in this space in a seamless and covert manner. This

¹³ Gerbrandy and Phoa (n 6).

allows for subtle diversion of consumers' attention towards favoured products and services.

Against the background of a large-scale, systemic biased intermediation, delivered through dynamically a personalised hypernudging mechanism, I framed the potential harms in relation to the limitation of market actors' freedom of choice. Information-rich environments, such as digital spaces, require some form of filtering of options due to the risk of the paradox of choice and companies often present "hyper-relevance" as a shield in justifying profiling and targeting their consumers. The line between empowerment and harmful steering of users is, however, thin, as digital platforms are not merely benevolent choice architects, but economic agents with strong financial incentives to draw out as much consumer surplus as possible.

Since the article (corresponding to chapter 4) was published, the Commission sent its Statement of Objections to Google regarding an investigation into AdTech markets. In its preliminary view, the Commission found that Google abused its dominant position by favouring its own ad exchange AdX in the ad selection auction as well as through the way ad buying tools Google Ads and DV360 place bids on ad exchanges.¹⁴ While the investigation does not concern consumer steering as such, it does highlight that exceedingly complex and opaque markets are particularly susceptible to market manipulation risks. Understanding how these markets operate, who are the main players as well as the partnership relations they are part of, are important for identifying how dominant undertakings could leverage their market power to advance their overall platform ecosystem functioning.

In this regard, relevant are also the DMA and the DSA, which since autumn 2022 have been enacted into law. As elaborated in chapter 2, these legal instruments include a number of transparency provisions aimed at targeting the opacity of digital advertising markets and their algorithmic systems. This, however, does not preclude application of European competition law to counter exclusionary effects on markets where hypernudging has been employed as a means for the dominant undertaking to engage in anticompetitive behaviour. As explained in chapters 1 and 3, the regulatory and competition law frameworks (continue to) exist alongside each other.

Building upon these findings, chapter 5 examined an example of hypernudging by general purpose voice assistants. Specifically, I compared the potential for dynamically personalised user steering with self-preferencing behaviour, which in *Google Search (Shopping)* has been established to constitute an independent type of abuse. The

¹⁴ Commission, 'Antitrust: Commission sends Statement of Objections to Google over abusive practices in online advertising technology' (14 June 2023), <https://ec.europa.eu/commission/presscorner/detail/en/ip_23_3207> accessed 10 August 2023.

parallels between Google’s conduct in the comparison shopping services market and hypernudging by voice assistants are obvious, with the former in essence boiling down to a simplistic framing of consumers’ options. As a more advanced version of such nudging mechanism, hypernudging may allow firms to engage in “self-preferecing on steroids.”

The original contribution of the respective article (corresponding to chapter 5) comes in showing that hypernudging, and other user influencing practices, may be adapted to different modes of user engagement. In this regard, it is important to stress that user engagement is constantly evolving: from a “click” of a mouse on the web, to a “touch” or “swipe” on a screen, the industry is now moving towards voice-based services.¹⁵ Big technology companies tend to be the trailblazers of these trends. They have clear motivations to establish their positions in these emergent markets and protect their respective platform ecosystems’ significance. The Commission’s IoT sector inquiry and following report corroborated this view, by revealing that the market for general purpose voice assistants is showing signs of concentration and barriers to entry and expansion, with a handful of big technology companies leading its development.¹⁶

I note that the article (corresponding to chapter 5) did not cover the recent proposal for the European Data Act, which sets out to tackle areas of concern identified in the IoT sector report. In light of the focus of the article, which concerns hypernudging as a potential vehicle for anticompetitive self-preferecing, the proposed Data Act was outside the scope of the analysis. However, as will be touched upon in section 4, while the proposed Data Act is a welcome development towards building European data economy, scholars expressed doubts over whether it is sufficiently strong in achieving its objectives of empowering users and unlocking large amounts of IoT data for innovation.¹⁷ Therefore, as is the case for the relationship between the regulatory instruments of the DMA and the DSA, competition law can be viewed as a complementary tool in curbing the negative effects of hypernudging by voice assistants.

¹⁵ Brett Kinsela, ‘Why tech giants are so desperate to provide your voice assistant’ (*Harvard Business Review*, 7 May 2019), <<https://hbr.org/2019/05/why-tech-giants-are-so-desperate-to-provide-your-voice-assistant>> accessed 17 July 2023; see also: Win Shih, ‘Voice revolution’ (2020) 56(4) *Library Technology Reports* 5.

¹⁶ Commission, ‘Final report - Sector Inquiry into consumer Internet of Things’ (Report) COM (2022) 19 final.

¹⁷ Wolfgang Kerber, ‘Governance of IoT data: why the EU Data Act will not fulfill its objectives’ (2023) 72(2) *GRUR International* 120; Josef Drexl and others, ‘Position Statement of the Max Planck Institute for Innovation and Competition of 25 May 2022 on the Commission’s Proposal of 23 February 2022 for a Regulation on Harmonised Rules on Fair Access to and Use of Data (Data Act)’ (2022). Max Planck Institute for Innovation & Competition Research Paper No. 22-05 <<https://ssrn.com/abstract=4136484>> accessed 10 August 2023; Inge Graef and Martin Husovec, ‘Seven Things to Improve in the Data Act’ (2022) <<https://ssrn.com/abstract=4051793>> accessed 10 August 2023.

The main contribution of the hypernudging examples evaluated in chapters 4 and 5 lies in showing that certain forms of dynamically personalised steering practices, resulting in exclusionary effects, fit within the current interpretation of European competition law and the enforcement priorities of competition authorities.¹⁸

3.2. Exploitative Abuse

In this dissertation, I focused mostly on examining hypernudging vis-à-vis exclusionary self-preferencing abuses. In this regard, hypernudging can be viewed as simply a “vehicle” for abuse to take place, instead of forming an abuse in its own right. I acknowledge that this is one type of abuse that is recognised in European competition law and practice. Hypernudging harms may, however, also be addressed by other abusive conduct categories.

In this regard, the category of exploitative abuse may also provide a relevant lens for assessing hypernudging processes in the European competition law context, even though it has only been minimally referenced in chapters 4 and 5. In fact, when it comes to personalised practices and behavioural manipulation, literature to date focused most on exploitative abuses as a viable route for abuse of dominance enforcement.¹⁹ This focus in the literature allowed me to provide an original perspective on the subject by exploring hypernudging in relation to exclusionary abuses. However, for the purposes of providing a full overview of hypernudging vis-à-vis abuse of dominance prohibiting, this conclusion remarks on its exploitative potential.

Exploitative abuse is characterised by direct harm to consumers and is most closely associated with excessive pricing, discriminatory pricing, and unfair trading conditions – practices generally covered by Articles 102(a) and (c) TFEU.²⁰ There is no clear guidance as to the substantive assessment or enforcement against exploitative behaviour. The Commission’s *Guidance on Enforcement Priorities* is limited to exclusionary abuses, meaning that the role of exploitation in European competition law context has been shaped by the Court.²¹

This can be partially explained by the fact that exploitative abuses are particularly challenging to enforce against because of uncertainty as to when a dominant undertaking’s behaviour leads to exploitation of consumers rather than utilising the

¹⁸ Commission, ‘Guidance on the Commission’s Enforcement Priorities in Applying Article 82 of the EC Treaty to Abusive Exclusionary Conduct by Dominant Undertakings’ (Communication) OJ C 45/7.

¹⁹ For example, see: Inge Graef, ‘Consumer sovereignty and competition law: from personalization to diversity’ (2021) 58(2) *Common Market Law Review* 471.

²⁰ Klaus Wiedemann and Marco Botta, ‘Exploitative conducts in digital markets: time for discussion after Facebook decision’ (2019) 10(8) *Journal of European Competition Law & Practice* 465, 465.

²¹ Akman P, ‘The role of Exploitation in Abuse in Article 82 EC’ (2009) 11 *Cambridge Yearbook of European Legal Studies* 165, 166.

full potential of their resources; there is no clear counter-factual scenario.²² This leads to high burden of proof for competition law enforcers. At the same time, exploitative conduct may already be covered by sector specific regulation.²³

The case law on exploitative practices largely relates to dominant undertakings' pricing strategies. For example, in the *General Motors NV v Commission* judgement, the ECJ considered a price to be excessive because it had no reasonable "relation to the economic value of the service provided".²⁴ *United Brands* clarified this position, by stating that "excessiveness could, inter alia, be determined objectively if it were possible for it to be calculated by making comparison between the selling price of the product in question and its cost of production".²⁵ Ultimately, identifying "excess" or "unfairness" requires establishing a competitive benchmark that the dominant undertaking's price can be compared to.²⁶

Focusing on pricing strategies, to some extent, allows setting a quantifiable standard for measuring exploitative effects on consumers. However, hyper-personalised digital environments render such assessments (even) more complex, as is highlighted in literature. Indeed, in line with the direction of earlier case law (from decades before digitalisation took off), digitalised personalised pricing has been one of the most prolifically studied strategies in relation to competition law and exploitation.²⁷ As digital markets are oiled by extensive personal data collection and processing, firms have more information than ever to discriminate among its customers and adjust prices according to individuals' willingness to pay.²⁸ It should be emphasised that the welfare effects of personalised pricing are ambiguous since these practices could enhance inclusion of lower budget consumers but extract more from higher budget ones. However, the ultimate aim of personalised pricing is still to shift consumer surplus from consumers to the firm, welfare distribution being a side effect of such practices,

²² Ibid, 7.

²³ Klaus Wiedemann and Marco Botta, 'To discriminate or not to discriminate? Personalised pricing in online markets as exploitative abuse of dominance' (2020) 50 *European Journal of Law and Economics* 381, 389.

²⁴ C-26/75 *General Motors Continental NV v Commission of the European Communities* [1975] ECLI:EU:C:1975:150, para 12.

²⁵ *United Brands v Commission* (n 12), paras 249-251.

²⁶ David Gilo, 'Excessive prices' <<https://www.concurrences.com/en/dictionary/excess-prices>> accessed 10 August 2023.

²⁷ OECD, 'Personalised pricing in the digital era' (2018) <<https://www.oecd.org/competition/personalised-pricing-in-the-digital-era.htm>> accessed 7 August 2023; Ariel Ezrachi and Maurice E Stucke, *Virtual competition: the promise and perils of the algorithm-driven economy* (Harvard University Press 2016).

²⁸ On different degrees of price discrimination, see: Hal R Varian, 'Price discrimination' in Richard Schmalensee and Robert Willig (eds), *Handbook of industrial organization. Vol.1* (Elsevier Science, 1989).

instead of a goal in its own right, thus bringing these practices in view of competition law enforcement.²⁹

Hypernudging processes could, in principle, also relate to personalised pricing, as (near-)perfect price discrimination does not affect consumers' economic incentives but instead is designed to meet their budgetary constraints. Consumers could be targeted in moments of susceptibility, allowing the firm to target their external and internal trigger points. However, hypernudging is more likely to manifest as a non-price strategy, especially once it manifests in zero-price markets.

In contrast to personalised pricing taking place through the means of hypernudging, in regards non-price strategies, “personalised exploitation” has been proposed as a possible standalone type of abuse.³⁰ Personalised exploitation provides for a plausibly constructed theory of harm, which incorporates dynamic consumer vulnerabilities into competition law analysis and covers different forms of behavioural manipulation. The challenge to competition authorities, as outlined above, would be drawing a line of what constitutes exploitation, especially when it concerns vague concepts such as “manipulation”, and determining when such manipulation would lead to exploitation that is anticompetitive. Nevertheless, considering that different forms of behavioural manipulation – practices that can intersect with hypernudging – are becoming recognised by EU policymakers,³¹ it can be expected that regulators and Courts will be faced with interpreting what it entails, contributing to expanding the understanding of its exploitative potential.

Furthermore, the mutually reinforcing relationship between exploitative conduct and exclusionary effects is not fundamentally new.³² This topic is ever-more salient when it comes to hyper-personalised digital markets. As discussed in chapter 5, this point was explored in the German Federal Cartel Office's case against Meta's data gathering

²⁹ Wiedemann and Botta (n 23).

³⁰ Graef (n 19).

³¹ Digital Services Act (n 2), article 25.

³² Commissioner Kroes: “it is wise in [their] enforcement policy to give priority to so-called exclusionary abuses, since exclusion is often at the basis of later exploitation of customers.” See: Neelie Kroes, ‘Tackling Exclusionary Practices to Avoid Exploitation of Market Power: Some Preliminary Thoughts on the Policy Review of Article 82’ in Barry Hawk (ed) *International Antitrust Law and Policy: Fordham Corporate Law Institute Annual Proceedings 2005* (New York Juris Publishing 2006) 384.

practices.³³ In the context of harmful hypernudging processes, this point may logically be assessed and incorporated whilst building a credible theory of harm.

3.3. The Nexus between Competition and Democracy: Political Hypernudging

Chapters 4 and 5 were framed from the internal perspective of the law, meaning that hypernudging was examined in light of the current European competition law's legal practice and enforcement priorities. The assessment of hypernudging in the AdTech and general purpose voice assistants' markets revealed that these processes may fit within the contours of the currently existing theories of harm and as negatively impacting consumer welfare.

Chapter 6, which corresponds to the article co-written with Anna Gerbrandy, takes a different approach and questions the very boundaries of European competition law by adopting a normative lens which incorporates an external perspective of the law. In doing so, we explored the example of political microtargeting – a form of political hypernudging with effects on democratic processes and fundamental values. In the context of the power of big technology companies, which act as vital infrastructures for political microtargeting of scale to take place, there is both a foundational commonality and an inherent tension between economic freedom and political freedom. By predominantly following market logic and financial incentives,³⁴ these companies in effect reduce incommensurable democratic values to fit economic metrics. In this regard, market and non-market effects become inextricably linked. This observation disputes the narrative of big technology companies being mere facilitators of political microtargeting, and campaigning broadly, and reveal a more proactive role in shaping democratic processes and discourses.³⁵

To answer the question of whether European competition law can and should address the negative effects of political microtargeting to citizen values, we delved into the goals of European competition law. Chapter 3 forms the theoretical and normative basis

³³ Bundeskartellamt, 'Bundeskartellamt prohibits Facebook from combining user data from different sources' (7 February 2019) <https://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Pressemittelungen/2019/07_02_2019_Facebook.html> accessed 14 December 2022; Case C-252/21 *Meta Platforms Inc., formerly Facebook Inc., Meta Platforms Ireland Limited, formerly Facebook Ireland Ltd., Facebook Deutschland GmbH v Bundeskartellamt, interveners: Verbraucherzentrale Bundesverband e.V.* [2022] ECLI:EU:C:2022:704, Opinion of AG Rantos; C-252/21 *Meta Platforms Inc. v Bundeskartellamt* [2023] ECLI:EU:C:2023:537.

³⁴ Predominantly, because political advertising is subject to certain regulatory restrictions and requirements, which were briefly touched upon in chapter 6.

³⁵ Natali Helberger, 'The Political Power of Platforms: How Current Attempts to Regulate Misinformation Amplify Opinion Power' (2020) 8(6) *Digital Journalism* 842.

for testing the limits of competition law as a legal instrument that is fit in addressing non-market effects.

As a starting position, in this dissertation I subscribed to the plurality of goals thesis of European competition law, which can be contrasted with the view that competition rules safeguard a singular aim of consumer welfare.³⁶ Since modernisation, consumer welfare has been recognised as an attractive enforcement standard because it allows for quantification of effects of specific practices and has even been considered as a “neutral” or “objective” yardstick for enhancing legal certainty. However, as any policy goal, it implies a normative choice – in competition law enforcement prioritising consumer welfare generally means excluding public interest considerations such as sustainability, equality, or promotion of individual freedoms.

One normative stance in this dissertation is that certain values and domains of human life ought not be commodified by market forces. In line with this view, European competition law should be interpreted in light of the Treaty objectives, sometimes necessitating balancing different and sometimes opposing objectives against each other. After all, competition rules derive their validity from the changing societal norms that form the basis of the EU and must be viewed in conjunction with the EU’s constitutional set-up. Accordingly, Article 2 TEU lays down the values upon which the Union is built upon and Article 3 TEU stresses its aims, explicating “highly competitive social market economy’ goal.

The above led to the socio-historical roots of European competition law and the role of “economic freedom” – the lens adopted by the Ordoliberal school of thought, which has been influential in the formation and development of competition law in the EU. In essence, market actors are free to engage in economic activities as they see fit, as long as they do so within the contours established by the State in the economic constitution. Thus, economic freedom is not boundless and, in the EU, can be limited by certain public interest considerations. Furthermore, economic freedom and political freedom are in constant tension, as excessive power in both market and public domains leads to the threat of distortion of markets and political capture. With the adoption of the social market economy goal in the EU, the door has been opened to infusing social goals into the market economy context.

³⁶ Note, the Commission has recently re-affirmed the plurality of goals thesis in the proposed revision on the *Guidance on Enforcement Priorities in applying Article 82 EC*, which stated that competition can “contribute to objectives that go beyond consumer welfare, such as plurality in a democratic society”. See: Amendments to the Communication from the Commission Guidance on the Commission’s enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings [2023] C(2023) 1923 final, 1. <https://competition-policy.ec.europa.eu/system/files/2023-03/20230327_amending_communication_art_102_0.pdf> accessed 8 August 2023.

The examination of political microtargeting in chapter 6 builds upon these themes. We explored the nexus between European competition law and democracy through the tension between economic freedom and political freedom, and the values of autonomy and equality, which are required for political freedom to fully materialise.

Against the backdrop of the digital transition and the rise of big technology companies as private infrastructures that form the basis of societal institutions online, private economic power is shifting from the economic into the political domain, (potentially) undermining democratic processes. While *de facto* acting as public actors, these companies' public power is not legitimised by the law or the public; they lack structures and institutions of accountability. As our argument progressed, we showed that big technology companies in effect treat user-citizens as user-consumers, in effect commodifying democratic processes and the deliberative public sphere. From European competition law's perspective, however, this concern is independent of whether private power leads to an increase in welfare, leaving the question open whether "consumer welfare" is an appropriate yardstick in the changing societal context where market and non-market effects are entwined. This coincides with the broader debate labelled "digital constitutionalism", which concerns finding the new equilibrium between the market and non-market values in the digital sphere.

Our analysis in chapter 6 allowed us to draw a nuanced conclusion that European competition law can (and should) contribute to strengthening the open and democratic society in the EU, because the goals of competition law extend beyond consumer welfare. In case of political microtargeting, the sources of the negative effects on citizen-values are strongly connected to the economic power of big technology companies and the digital economy dynamics which implicitly favour market-oriented values. This reasoning leads to concluding that, by building upon existing concepts and normative underpinnings, competition law can and should be shaped to counter negative effects of large scale political microtargeting campaigns using infrastructures of the big technology companies. This observation leads also feeds into a broader normative question: how the understanding of economic freedom and competitiveness in markets can be reshaped in order to view them as being supported, instead of hindered, by the public values in the Union. Here, the broader EU Digital Policy Agenda is relevant.

4. Hypernudging in the EU's Digital Policy Agenda

The research period between 1 May 2019 and 1 April 2023 has been generous in EU policy and legislative developments when it comes to regulating digital markets. These developments happened at an accelerated pace and were too significant not

to be accounted for during the writing process of (the articles and chapters of) this dissertation in order to meaningfully answer the main research question on European competition law's role in addressing multifaceted hypernudging harms. The introduction of the Digital Services Package, comprising of the DMA and the DSA, marks the strengthening of the legal framework in the quest for fair and contestable digital markets, where users' fundamental rights are respected. In addition, with the proposed AI Act, the EU is positioning itself as a global leader in regulating different types of AI systems with the aim of ensuring human-centred and trustworthy AI development. In chapter 2, I examined hypernudging against these regulatory initiatives, showing that despite not being addressed explicitly, certain aspects of hypernudging are covered directly or indirectly.

It is important to note that at the time of the publication of the article corresponding to chapter 2, the DSA and the AI Act were at the proposal stage. Since, however, the DSA has been enacted into law, including relevant amendments such as a new *de facto* hypernudging prohibition in article 25, as outlined above. By the same token, the AI Act is only now approaching the trilogue, with the Parliament's position including a number of relevant amendments in relation to the topic of this dissertation, such as additional prohibitions on putting into service or the use of AI systems for biometric categorisation,³⁷ predictive policing systems,³⁸ emotion recognition systems in law enforcement, border management and education institutions,³⁹ facial recognition through an untargeted scraping of the internet images or CCTV footage,⁴⁰ as well as post-remote biometric identification systems.⁴¹ Furthermore, the scope and compliance requirements for high-risk AI systems is expanded. The Parliament's proposal adds that an AI system listed in Annex III is to be considered high-risk if it poses significant risk to an individual's health, safety, or fundamental rights.⁴² Since AI systems are the key facilitators of hypernudging processes, it is expected that this legal instrument will be impactful on its most problematic forms by either prohibiting them or minimising the risk of harm.

Finally, while not covered in this dissertation, a mention should be made of the proposed European Data Act, which lays down harmonised rules on the sharing of data generated

³⁷ Amendments adopted by the European Parliament on 14 June 2023 on the proposal for a regulation of the European Parliament and of the Council on laying down harmonised rules on artificial intelligence (Artificial Intelligence Act) and amending certain Union legislative acts (COM(2021)0206 – C9-0146/2021 – 2021/0106(COD)) [2023] P9_TA(2023)0236, article 5(ba).

³⁸ *Ibid*, article 5(da).

³⁹ *Ibid*, article 5(dc).

⁴⁰ *Ibid*, article 5(db).

⁴¹ *Ibid*, article 5 (dd).

⁴² For a short overview see: 'European Parliament adopts its negotiating position on the EU AI Act' (*Gibson Dunn*, 21 June 2023) <<https://www.gibsondunn.com/european-parliament-adopts-its-negotiating-position-on-the-eu-ai-act/>> accessed 10 August 2023.

by the use of connected products or related services, on ensuring fairness in data sharing contracts and allowing public sector bodies to access data held by market actors in cases of “exceptional need”.⁴³ As data are at the heart of hypernudging processes, the proposal includes provisions that cover aspects of hypernudging indirectly. With regard to users, it provides a user rights mechanism, which ensures that users of connected products and related services would be able to use their data, including sharing them with third parties of their choice,⁴⁴ and monetising that data.⁴⁵ Furthermore, the exercise of users’ rights or choices should not be impeded or circumvented by data holders or data recipients by way of presenting choices in non-neutral way, coercing, deceiving, or manipulating users.⁴⁶ Despite creating additional rights to users, the proposed mechanism has been critiqued for expected limited effectiveness in empowering users, because it does not address the informational and behavioural issues, as well as incentives, they face when invoking their rights.⁴⁷

While it is outside the scope of this concluding chapter to analyse each provision in depth, in this section I identify several overarching regulatory themes that are relevant for answering the main research question on the role of European competition law: increasing transparency of opaque algorithmic systems and prominence given to fundamental rights and public values. In this regard it is important to stress not only the EU’s normative position, as expressed through the policy documents, law and rhetoric, but also the legal reality when it comes to expected enforcement of the emergent regulatory frameworks. Underscoring potential discrepancies and noting the general relationship between competition law and regulatory instruments in the European Union, this background lays the foundation for providing a nuanced answer about the role for European competition law in the mosaic of legal instruments set to tackle hypernudging harms.

4.1. Increasing Transparency of Opaque Algorithmic Systems

It is a truism that understanding the workings of digital platforms and their proprietary algorithmic systems is challenging from an outsiders’ point of view due to the opaqueness and complexity of these socio-technical systems. From a technical perspective, algorithmic systems, in particular AI systems and AI models, are

⁴³ Commission, ‘Proposal for a Regulation of the European Parliament and of the Council on harmonized rules on fair access and use of data (Data Act)’ COM/2022/68 final; Luca Bertuzzi, ‘Data Act: EU institutions finalise agreement on industrial data law’ (*Euractiv*, 30 June 2023) <<https://www.euractiv.com/section/data-privacy/news/data-act-eu-institutions-finalise-agreement-on-industrial-data-law/>> accessed 10 August 2023.

⁴⁴ Data Act (n 43), articles 4 and 5, recital 5.

⁴⁵ *Ibid*, recital 29.

⁴⁶ *Ibid*, article 4(1d) and article 6(2).

⁴⁷ Kerber (n 17).

considered opaque when they are too big and too complex to be human understandable or when their internal decision-making processes are obscure. From a policy point of view, opacity can also be understood as absence of transparency.⁴⁸ Throughout the chapters of this dissertation I stressed that hypernudging and its seamlessness is a product of such systems, rendering it a particularly challenging subject to detect and thereby study. Thus, transparency obligations form an integral part of policies related to understanding the functioning, prevalence and impact of hypernudging in practice, which also may feed into competition law enforcement in relation to hypernudging practices.

As elaborated in chapters 2 and 3, the early laissez faire policies to regulating digital markets led to plethora of challenges in the market and public domains, calling for greater platform accountability in the EU. One of the identified concerns relates to the information asymmetry between digital platforms and regulators, business users and consumers. Consequently, a broad agreement has emerged among scholars and policymakers that addressing the risks and concerns related to the “black box” character of algorithmic systems necessitate greater transparency and observability.⁴⁹ It is noteworthy that observability differs from transparency, as it “emphasizes the conditions for the practice of observing. These conditions may facilitate or hamper modes of observing and impact the capacity to generate external insights”.⁵⁰

When it comes to the emergent European regulatory landscape for digital markets, chapter 2 emphasised that the recurring theme in all examined (proposed) legal instruments is a strong emphasis on transparency obligations.⁵¹ Big technology companies are among most affected by the new requirements, as they are obliged to provide information to business users and consumers in advertising markets,⁵² and be

⁴⁸ Cecilia Panigutti and others, ‘The role of explainable AI in the context of the AI Act’ (The 2023 ACM Conference on Fairness, Accountability and Transparency, Chicago, 12-15 June 2023) 1139 <<https://dl.acm.org/doi/10.1145/3593013.3594069>> accessed 20 August 2023.

⁴⁹ Paddy Leerssen, *Seeing what others are seeing: Studies in the regulation of transparency of social media recommender systems* (PhD thesis, University of Amsterdam, 2023). Ferrari, van Dijck and van den Bosch discuss the issue of “observability” in relation to foundational models, which are owned by proprietary actors, yet may transform the very production of knowledge. They make a distinction between “open” and “public” foundation models, the latter referring to their potential public utility character. See: Fabian Ferrari, José van Dijck and Antal van den Bosch, ‘Foundation models and the privatization of public knowledge’ (2023) *Nature Machine Intelligence* 1.

⁵⁰ Rieder and Hofmann (n 4), 3.

⁵¹ For an overview of EU’s approach to regulating transparency of recommender systems and digital platforms more broadly, see: Philipp Hacker, Johann Cordes and Janina Rochon, ‘Regulating gatekeeper AI and Data: Transparency, Access and Fairness under the DMA, the GDPR, and beyond’ (2022) arXiv preprint arXiv:2212.04997.

⁵² Regulation (EU) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector and amending Directives (EU) 2019/1937 and (EU) 2020/1828 (Digital Markets Act) [2022] OJ L 265/1, article 5(9) and 6(8); Digital Services Act (n 1), article 26 and article 39.

transparent and fair regarding their ranking algorithms,⁵³ and in their recommender systems.⁵⁴ Furthermore, Very Large Online Platforms (VLOP) and Very Large Online Search Engines (VLOSE) are subject to rigorous transparency reporting obligations.⁵⁵

By the same token, the proposed AI Act provisions are designed in the spirit of the “explainable AI” debate, which calls for “the ability to explain both the technical processes of an AI system and the related human decisions (e.g., application areas of a system)”.⁵⁶ Transparency is a general principle applicable to all AI systems,⁵⁷ with high-risk systems, that are considered to be most impactful on human life, subject to specific transparency and human oversight requirements.⁵⁸ Furthermore, when AI systems, including generative foundation models, interact with natural persons, there is a requirement to ensure transparency about the fact that the content is generated by an AI system and not by humans.⁵⁹

From the perspective of users, these provisions fit within the individual empowerment paradigm, which is based on the premise that providing users with sufficient information will allow them to make better decisions for themselves. This reflects the liberal notion of autonomy, which favours ideals of individualism and substantive independence, and does not recognise the importance of human dependency and vulnerability in social, political and cultural contexts. However, the limits of disclosure as user empowerment mechanism have been widely researched; digital environments creating enhanced challenges in additional information meaningfully improving users’ decision-making.⁶⁰ As a result, scholars predict that these novel transparency obligations will have a limited impact on a user’s behaviour.⁶¹ In this regard, it is necessary to continue to study and empirically test what it means to make information more accessible to consumers in practice, and what kind of defaults are required to

⁵³ Digital Markets Act (n 52), article 6(5).

⁵⁴ Digital Services Act (n 2), article 27.

⁵⁵ Ibid, articles 15, 24, and 42.

⁵⁶ Commission, ‘Ethics guidelines for trustworthy AI’ <<https://ec.europa.eu/futurium/en/ai-alliance-consultation/guidelines/1.html#:~:text=Explainability,.application%20areas%20of%20a%20system>> accessed 10 August 2023.

⁵⁷ AI Act Amendments (n 37), article 4(a)

⁵⁸ Ibid, article 13 and recital 47, and article 14 and recital 48, respectively.

⁵⁹ Ibid, recital 60 e, f & h; Ferrari, van Dijk and van den Bosch (n 46)

⁶⁰ The debate is particularly prolific in relation to consent mechanism, which explores the behavioral and structural problems that undermine its effectiveness: Daniel J Solove, ‘Introduction: Privacy Self-Management and the Consent Dilemma’ (2013) 126(7) *Harvard Law Review* 1880; Solon Barocas and Helen Nissenbaum. ‘Big data’s end run around anonymity and consent’ in Julia Lane, Victoria Stodden and Stefan Bender (eds), *Privacy, big data, and the public good: Frameworks for engagement* (Cambridge University Press 2014); see also: Carl E Schneider and Omri Ben-Shahar, *More than you wanted to know: The failure of mandated disclosure* (Princeton University Press 2014).

⁶¹ Hacker, Cordes and Rochon (n 51).

facilitate active decision-making, whilst accounting for the long-lasting relationship between the consumer and the digital platform.⁶²

Finally, the outlined transparency requirements are nevertheless expected to contribute to strengthening the responsibility of platforms, especially where such duties and rights were not applicable before. While the role of the users is expected to remain relatively passive, platform disclosures will be analysed by researchers, consumer associations and enforcement authorities, to observe discrepancies with the law, leading to deterrence and compliance pressure.⁶³ If adequately enforced, transparency obligations may also play a key role in understanding opaque hypernudging processes in their multiple aspects, uncovering the risks and weaknesses embedded in digital environments that allow for harmful hypernudging to take place. This includes understanding by competition law enforcers. However, for that to happen, it is firstly necessary to agree on the shared understanding of problematic user influencing mechanisms and harms that these stakeholders should be looking out for. This ties back to the point made earlier that there is a need for a shared vocabulary in order to prevent siloed thinking and discourses, and in turn enhance the enforcement of the relevant provisions across legal domains.

4.2. Fundamental Rights and Public Values

The findings of this dissertation lead to a second overarching regulatory theme, which is emphasised by the emergent paradox: the more hyper-personalised digital environments become, the more important it is to identify and safeguard shared values. As touched upon in chapters 2 and 3, the EU is emerging as one of the leading global actors in regulating the digital transition with the digital policy oriented towards promoting fundamental rights and public values.

The references to users' fundamental rights are prevalent in the regulatory instruments examined in this dissertation. The DMA and the DSA are explicitly interpreted and applied in light of the fundamental rights and principles recognised by the Charter of Fundamental Rights of the EU.⁶⁴ The DSA explicates its aim to contribute to the proper functioning of the internal market for intermediary services by creating a harmonised legal framework that fosters innovation and safeguards fundamental rights.⁶⁵ The proposed AI Act adheres to an aim to “promote the uptake of human-

⁶² For instance, the requirement of the DMA to make an active choice on specific parameters regarding visual interfaces when it comes to users interacting with gatekeeper's core platform service for the first time. See: Digital Markets Act (n 52), article 6(3).

⁶³ Hacker, Cordes and Rochon (n 47).

⁶⁴ Digital Markets Act (n 52), recital 19; Digital Services Act (n 2), recital 153

⁶⁵ Digital Services Act (n 2), article 1(1).

centric and trustworthy AI and to ensure high level of protection of health, safety, fundamental rights, democracy and the rule of law, and the environment from the harmful effects of AI while supporting innovation”.⁶⁶ The Commission’s proposal made referenced “fundamental rights” eighty-one times, highlighting the importance placed on protecting users, especially in areas of life that are most influential to their livelihood.

The above suggests that when it comes to regulating digital markets, the EU is striving towards rebalancing digital policies, arguably in favour of the public-oriented goals. However, despite the strong rhetoric related to creating a distinct European digital identity, the practical implications of emphasising fundamental rights and non-market values are not clear. The findings of chapter 2 suggest that the regulatory developments do not, in fact, boldly reshape the pre-existing dichotomy between the laws that regulate the market sphere and the laws that are applicable in the public sphere. In light of this tension, and disproportionate favouring of the market-oriented policies in digital markets to date, a plausible way of viewing the regulatory efforts of the EU is as a way of restoring – or equalising – that balance. In other words, in the current political economy climate, the restoration of balance is already a formidable challenge, justifying the strong emphasis on fundamental rights.

Hypernudging processes pierce to the core of understanding and manipulating an individual’s specific circumstances and context. This may have negative implications on their freedom, autonomy, and equality – values that are foundational to the EU’s constitutional set-up and ought not be commodified by the market forces. These values not only underlie the rhetoric of the new regulatory instruments but will also inform their enforcement practice. Equally, these values are important in shaping the EU’s economic system and in turn the application of competition law to the different hypernudging practices examined in this dissertation.

5. Concluding remarks

In these concluding remarks of the final chapter, I will formulate an answer to the overarching research question:

What is the role that European competition law ought to play in addressing the challenges of hypernudging by big technology companies?

Throughout this dissertation, I have shown that the role European competition law ought to play in addressing the challenges of hypernudging by big technology companies is *an active* one. This answer, I submit, is not as straightforward as it appears and

⁶⁶ AI Act Amendments (n 37), article 1.

requires peeling through the different layers of perspectives, including reflections on the positive, normative, and pragmatic positions of the law.

Before delving into these different perspectives, let me come back to the central subject of this dissertation – the hypernudging phenomenon. While the concept is relatively novel, the findings of this dissertation emphasise that hypernudging processes follow similar mechanisms that have been researched in the context of other user influencing practices, such as dark patterns. The highlighted problem of conceptual inconsistency in user influencing discourses reveal a tension, which is relevant for EU policymakers. On the one hand, legal language and rules require a high degree of precision, which is important for upholding the principle of legal certainty. On the other hand, it is apparent that different stakeholders do not apply the same interpretations or “speak the same language” when it comes to different user influencing practices; hypernudging is just becoming explored in the relevant debates. Considering that hypernudging processes lead to multifaceted harms, tackling these threats require a multifaceted and coherent response from the law. In order to avoid the fragmentation in legal thinking and move towards a more harmonised legal approach, the first step necessitates crossing the language siloes and sharing the knowledge about user influencing practices among different policy actors.

When it comes to the role for European competition law – the legal field which is the main focus of this dissertation – it is logical to begin by assessing hypernudging in relation to the positive state of the law. Hypernudging, while largely overlooked by competition authorities to date, may become the means for dominant undertakings to engage in abusive conduct, such as anticompetitive self-preferencing or other forms of leveraging behaviour. In these circumstances there is nothing, in principle, precluding competition authorities from applying the existing theories of harm to hypernudging processes that harm consumer welfare.

Furthermore, I have stressed that the potential hypernudging harms are multifaceted and diffuse, leading to consequences for users in the economic, political, social, and personal domains. While reflecting upon the normative foundations of European competition law and positioning this legal field in the broader EU’s constitutional context, in this dissertation I take a normative position that it is possible to extrapolate the role that extends beyond economic-efficiency related harms. At the very least, in light of the contemporary challenges that include the digital transition, it is necessary to question how markets can best support the European society reflected in the EU’s normative commitments in the Treaties, legislation and policy documents, extending them beyond the paper tiger character. In this regard, the development and implementation of European competition policy by competition authorities and

legislators should be shaped in a way that supports the co-creation of such digital markets where economy and society work in concert.

Nevertheless, between what European competition law “can” and “ought to” do in regard to addressing multifaceted hypernudging harms, I would like to draw the attention of –specifically - the authorities implementing and enforcing the laws in the EU’s digital society to what I label a *pragmatic* position, which marries the normative and practical aspects of competition law enforcement.

In this pragmatic point of view, the role that European competition law ought to play in addressing hypernudging challenges is affected by the changing European regulatory landscape for digital markets. Since the beginning of the research project a number of relevant legal instruments have emerged to cover user influencing practices, implicitly including hypernudging, directly or indirectly. In the EU, competition law and regulation are viewed more as complements than substitutes; case law confirming the possibility of applying Article 102 TFEU despite dominant undertaking’s compliance or non-compliance to other legal rules.⁶⁷ Taking a step further, the seminal *Meta Platforms Inc. v Bundeskartellamt* confirmed that in the context of an article 102 TFEU investigation, a competition authority of a Member State, acting in line with the duty of sincere cooperation with relevant supervisory authorities, may find an infringement of a legal instrument other than competition law.⁶⁸

However, in cases of overlapping scope of application between competition law and regulation, a question emerges as to whether in those circumstances competition law should be applied, even if it is possible to do so. When push comes to shove, competition agencies are subject to institutional constraints, which require prioritisation of limited resources and taking on politically salient cases.

When it comes to hypernudging processes, different legal instruments will offer different solutions, and aim to tackle different goals. In principle, especially in cases where authorities are responsible for enforcing different legal instruments at the same time, it should be possible to choose which law is best suited to mitigate identified harms. In this regard, consider the example of the recent Federal Trade Commission’s lawsuit against Amazon for non-consensual enrolment into its Prime programme and complicating the cancellation process for Prime subscribers through alleged use of dark patterns.⁶⁹ The timely cases demonstrate not only that such practices are harmful

⁶⁷ C-457/10 *Astra Zeneca* [2012] ECLI:EU:C:2012:770, para 132.

⁶⁸ *Meta Platforms Inc. v Bundeskartellamt* (n 35), para 62.

⁶⁹ Case 2:23-cv-00932 *Federal Trade Commission v Amazon Inc.* (21 June 2023) United States District Court Western District of Washington <https://www.ftc.gov/system/files/ftc_gov/pdf/amazon-ros-ca-public-redacted-complaint-to_be_filed.pdf> accessed 10 August 2023.

to users, but also that there are clear synergies between consumer protection and competition laws.

Competition authorities, therefore, have to take an *active role* also in user influencing discourses, which to date reflect an increasingly salient missed opportunity in shaping future-proof digital policy in this regard. Against the backdrop of the emergent regulatory instruments, a degree of regulatory convergence is a necessary pre-condition to avoid siloed legal thinking on the subject of hypernudging, in turn moving away from piecemeal legal solutions to regulatory cooperation and collaboration.⁷⁰

As a final point, it must be stressed that the above discussion circles back to the need for a critical reflection on the normative bases: what are we safeguarding (against), really? If the EU is indeed moving towards greater protection of fundamental rights and public values, such as freedom, autonomy, and equality, it is also necessary to move from the rhetoric and consider what these normative commitments mean in practice. After all, a clearly formulated desired goal will inform the means for achieving it. This debate needs to be held including the relevant stakeholders: not only the policymakers, legislators, civil society and members of the industry, but also the users of digital technologies. Only by having competition authorities taking an active part of this debate, sharing knowledge between stakeholders, and identifying synergies between relevant legal fields, the multifaceted hypernudging phenomenon can be addressed comprehensively. In turn, this active role can contribute to European competition law uncovering its full potential in guarding the economy and society against the abuse of private power with entwined effects extending beyond the economic domain.

⁷⁰ Regulatory cooperation and collaboration may occur on distinct levels, including (1) internal cooperation between different departments within the same authority, responsible for enforcing different areas of law, (2) domestic cooperation between regulators working on user influencing practices across disciplines, (3) EU-level cooperation among Member States' authorities, and (4) international cooperation, see for examples: 'Compendium of approaches to improving competition in digital markets (G7 United Kingdom 2021, 29 November 2021) 31-36 <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1044981/Compendium_of_approaches_to_improving_competition_in_digital_markets_publication.pdf> accessed 23 August 2023; on the subject, see also: Bietti (n 8), 1.



Appendices

Annex I

Overview of EU Legal Instruments Relevant to Hypernudging

Note, there are no EU legal instruments that explicitly address “hypernudging”. Legal instruments covered in this dissertation include provisions that address hypernudging and its effects directly and indirectly. Directly relevant provisions are such provisions that refer to user influencing broadly, by mentioning, among others, “manipulation”, “deception”, “influence”, “interface design”. Indirectly relevant provisions are such provisions that indirectly deal with certain aspects of hypernudging such as, among others, “profiling”, “ranking” or “transparency”.

EU Legal Instruments	Relevant Provisions	
	Direct	Indirect
Regulation (EU) 2022/1925 Digital Markets Act [2022] OJ L 265/1	<p>Art. 13 Anti-circumvention</p> <p>(4) Prohibition to engage in behaviour (including behavioural techniques or interface design) that undermines effective compliance with articles 5, 6 and 7</p> <p>(5) Prohibition to make obtaining consent more burdensome</p> <p>(6) Prohibition to degrade the conditions or quality of service to business and end users who exercise their rights under articles 5, 6 and 7, or make the exercise of those rights more difficult</p>	<p>Art. 5 Obligations</p> <p>(2) Processing, combination and cross-use of personal data</p> <p>(9) Disclosure to advertisers</p> <p>(10) Disclosure to publishers</p> <p>Art. 6 Obligations to be further specified</p> <p>(3) User prompt for default service providers when dealing with operating systems, virtual assistants and web browsers.</p> <p>(4) Prompt for default downloaded software</p> <p>(5) Self-preferencing</p> <p>(6) Easy switch of service providers</p> <p>(8) Access to performance measures for advertisers and publishers</p> <p>(11) FRAND access conditions</p> <p>(13) Termination conditions without undue difficulty</p>
Regulation (EU) 2022/2065 Digital Services Act [2022] OJ L 277/1	<p>Art. 25 Online interface design and organisation</p> <p>(1) Prohibition from designing, organising or operating online interfaces in a way that deceives or manipulates the recipients of service or otherwise materially distorts or impairs the ability of the recipients of service to make free and informed decisions.</p> <p>(3) Non-exhaustive list of examples</p>	<p>Art. 15 Transparency reporting obligations for providers of intermediary service</p> <p>Art. 26 Advertising on online platforms</p> <p>Art. 27 Recommender system transparency</p> <p>Art. 28 Online protection of minors</p> <p>(2) Prohibition of presenting advertisements to minors based on profiling</p> <p>Art. 31 Compliance by design</p> <p>Art. 35 VLOPs and VLOSEs mitigation of risks</p> <p>Art. 38 VLOPs and VLOSEs recommender systems with option that is not based on profiling</p> <p>Art. 39 VLOPs and VLOSEs additional online transparency requirements</p>

EU Legal Instruments	Relevant Provisions	
	Direct	Indirect
Commission Proposal for Artificial Intelligence Act COM (2021) 206 final	<p>Art. 5 Prohibited AI practices</p> <p>(1)(a) Subliminal techniques</p> <p>(1)(b) Exploiting any of the vulnerabilities of a specific group of persons</p> <p>(2) The use of ‘real-time’ biometric identification systems in publicly accessible spaces</p>	<p>Art. 5 Prohibited AI practices</p> <p>(1)(c) Classification of the trustworthiness of natural persons</p> <p>Art. 13 High-risk AI systems provision of information to users</p> <p>Art. 52 Transparency obligations for AI systems intended to interact with natural persons</p> <p>(2) Users of emotion recognition systems or a biometric categorisation system</p> <p>(3) Users of an AI system that generates or manipulates image, audio or video content</p>
Commission Proposal for Data Act COM (2022) 68 final	<p>Art. 6 Obligations of third parties receiving data at the request of the user</p> <p>(2)(a) The third party shall not coerce, deceive, manipulate the user in any way, by subverting or impairing the autonomy, decision-making or choices of the user, including by means of a digital interface.</p>	<p>Art. 3 Obligation to make data generated by the use of products and related services accessible</p> <p>(1) Products shall be designed and manufactured, and related services provided, in a way that data generated by the user is easily, securely, by default accessible.</p> <p>Art. 6 Obligations of third parties receiving data at the request of the user</p> <p>(2)(b) The third party shall not use the data it receives for the profiling of natural persons.</p> <p>Art. 23 Removing obstacles to effective switching between providers of data processing services</p> <p>(1) Remove commercial, technical and organisational obstacles to switching.</p>

EU Legal Instruments	Relevant Provisions	
	Direct	Indirect
<p>Directive (EU) 2005/29/EC as amended by Directive (EU) 2019/2161 Unfair Commercial Practices Directive OJ L 149/22</p>	<p>Art. 5 Prohibition of unfair commercial practices (2)(b) Commercial practices which are likely to materially distort economic behaviour with regard to the product of the average consumers (3) Materially distort economic behaviour of vulnerable consumers</p> <p>Art. 6 Misleading actions (1) Commercial practices is misleading if it contains false information or deceives or is likely to deceive the average consumer</p> <p>Art. 7 Misleading omissions (2) Prohibition for a trader to hide or provide information in an unclear, unintelligible, ambiguous or untimely manner</p> <p>Art. 8 Aggressive commercial practices Commercial practices that by harassment, coercion, including the use of force or undue influence, (is likely to) significantly impair the average consumer’s freedom of choice or conduct.</p>	
<p>Regulation (EU) 2016/679 General Data Protection Regulation [2016] OJ L 119/1</p>	<p>Art. 25 Data protection by design and by default (1) The controller shall, subject to limitations, implement appropriate technical and organisational measures, which are designed to implement data-protection principles in an effective manner and to integrate necessary safeguards to meet the requirements of this regulation and to protect the rights of the data subjects.</p>	<p>Art. 5 Principles relating to processing of personal data Art. 7 Conditions for consent Art. 8 Conditions applicable to child’s consent in relation to information society services Art. 9 Processing of special categories of personal data Art. 12 Transparent information, communication and modalities for the exercise of the rights of the data subject</p>



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Appendices

Summary

Summary

This dissertation is about *hypernudging* – dynamically personalised user steering, which is one of the most sophisticated forms of user influencing online. With the rise of the digital economy, user influencing has become an integral part of digital platforms’ business models, with the aim of nudging users to spend more time, attention and money on their products and services. While in information-rich environments it is, to some extent, necessary to filter and rank users’ options, when the interests of a digital platform diverge from those of a user, there is a risk of individual and collective harm.

For the purposes of this research, hypernudging is placed in the context of the power of big technology companies and their prominent role in shaping digital markets. This deliberate choice stems from the fact that the research is embedded in the European Research Council (ERC) Starting Grant (No. 852005) project “Modern Bigness”, which develops a novel taxonomy of power in relation to the digital conglomerates and assesses whether European competition law can and should address the multifaceted challenges posed by this power, as it extends beyond the market domain. Against this background, this dissertation takes the form of a legal and normative assessment of hypernudging by big technology companies, as one of the manifestations of their composite power, vis-à-vis the abuse of dominance prohibition in European competition law. It focuses on the main research question:

What is the role that European competition law ought to play in addressing the challenges of hypernudging by big technology companies?

In order to provide a comprehensive answer, I examine hypernudging in relation to three interrelated underlying themes: (1) the transdisciplinary debate on user influencing, (2) the European competition law perspective, with specific focus on the abuse of dominance prohibition, and (3) the EU’s broader digital policy agenda for regulating digital markets.

Hypernudging in the Transdisciplinary Debate on User Influencing

User influencing online is not a new phenomenon. In particular, the deceptive design discourse began in 2010, with User Experience (UX) designer Harry Brignull starting *darkpatterns.org* website, in which he collected user interface design elements aimed to trick, deceive and manipulate users’ behaviour online – practices also known as “dark patterns”. Successive literature has built upon and expanded different categorisations of deceptive design elements, focusing on the development of empirical studies and taxonomies. With fast paced technological developments and increasing reliance on data-driven business strategies built around profiling and targeting of users, it is

acknowledged that user influencing practices are advancing and morphing in form too. Yet, they are only beginning to be explored in the relevant academic and policy debates.

In this dissertation, I define and examine hypernudging in its multiple aspects in order to provide a useful conceptual tool for researchers and policymakers to ground further empirical research and problematisation of the phenomenon upon (chapter 2). In doing so, I introduce an original consolidated hypernudging framework, which consists of cumulative criteria based on behavioural-economics informed nudge theory, the Human-Computer Interaction (HCI) literature on digital nudging, and unique elements of hypernudging, as coined in the interdisciplinary law and informatics literature. Particular emphasis is placed on the characteristics of hypernudging that render it an advanced form of user influencing online: hyper-personalisation, multi-dimensionality and adaptability to different user interfaces. Building upon specific examples of hypernudging, I further assess how these processes may lead to multifaceted and diffuse individual and collective harms.

Hypernudging as Abuse of Dominance

At the heart of this research is a legal problem, which involves analysing the current state of European competition law and evaluating its effectiveness in tackling multifaceted hypernudging harms. As a field of law closely associated with curbing the negative manifestations of market power, European competition law provides a logical yet original perspective on the topic. The dark horse character stems from its enforcement focus on safeguarding economic efficiency and consumer welfare, which means that individual consumer harms, which are strongly linked to user influencing discourses, fall outside the scope of its application. Nevertheless, when examining case studies in the ad tech (chapter 4) and general purpose voice assistant markets (chapter 5), it becomes apparent that once these practices are deployed in a large-scale, systemic manner, collective harms can lead to market distortions that fit within the current European competition law paradigm. In particular, hypernudging could become a means for firms with significant market power to engage in exclusionary self-preferencing behaviour. This collective harm perspective is salient in the context of the power of big technology companies, which enables and reinforces hypernudging users on a large scale.

However, the characteristics and dynamics of digital markets have challenged the application of traditional competition law tools, methodologies and theories of harm. As big technology companies increasingly shape societal structures online, the distinction between market and non-market spheres becomes blurred. This issue is particularly contentious in European competition law and calls for a careful re-evaluation of its legal boundaries.

In order to make a meaningful contribution to the discussion on the role of European competition law in relation to the multifaceted phenomenon of hypernudging, I develop a normative framework (chapter 3). Grounded on the EU's constitutional principles and its commitment to an open and democratic society, based on the rule of law, fundamental rights and public values, I identify two core values for the framework: autonomy, as a cornerstone of freedom and equality of market actors, including users.

While the articulated normative position forms the basis of this dissertation, the chosen case study on political microtargeting, a form of hypernudging, aims to illustrate both the flexibility and constraints of European competition law in addressing the (potential) negative effects on the digital public sphere (chapter 6). Given the symbiotic relationship between competition law and democracy, there is an argument to be made that as the composite power of big technology companies extends into the political sphere, specific situations may necessitate balancing between efficiency considerations and democratic considerations, with preference for the latter. To explore this idea further, I examine the "citizen welfare standard" as a more comprehensive tool for capturing relevant harms. The role for European competition law in addressing political microtargeting harms should be seen as complementary and integrated into the broader regulatory landscape for regulating digital markets in a way that safeguards fundamental rights and public values in the EU.

Hypernudging in the EU's Digital Policy Agenda

Amidst growing concerns about the digital transition, the European regulatory landscape for digital markets is undergoing a transformation, characterised not only by an increasing regulatory scrutiny of powerful digital platforms but also by a notable shift towards safeguarding the interests of citizens. In this context, I situate hypernudging within the broader EU's digital policy agenda, focusing on harmful user influencing online. I examine several legal instruments that deal, directly or indirectly, with aspects of hypernudging and highlight the emergent regulatory themes, benefits and limitations of the (proposed) legal frameworks. In particular, I focus on the Digital Markets Act, the Digital Services Act and the proposed AI Act, to underline the complexities policymakers face in addressing hypernudging in the user-centric digital economy (chapter 2).

As the EU defines a clear normative stance favouring the development of digital markets where economy and society work in concert and public values are prioritised, it is necessary to reflect on how European competition law and policy can be operationalised to align with these overarching goals. In the context of addressing hypernudging challenges, this dissertation underscores the importance of an *active*

role for European competition law, taking into account positive, normative and pragmatic perspectives (chapter 7). While the current competition law theories can be applied to hypernudging processes, a normative position advocates for an expanded role in facilitating the co-creation of digital markets in line with EU values. The pragmatic perspective recognises the evolving regulatory landscape, highlighting the need for a degree of regulatory convergence to avoid fragmented legal thinking. Consequently, this dissertation calls competition law enforcers to actively engage in user influencing discourses and collaborate with other regulatory bodies, with the aim to comprehensively address the multifaceted hypernudging phenomenon.



Appendices

Samenvatting

Samenvatting

Deze dissertatie gaat over *hypernudging* – de dynamisch gepersonaliseerde aansturing van gebruikers, die als een van de meest verfijnde vormen van online gebruikersbeïnvloeding geldt. Met de opkomst van de digitale economie is gebruikersbeïnvloeding een wezenlijk onderdeel geworden van de bedrijfsmodellen van digitale platforms, waarbij het doel is gebruikers er op subtiele wijze toe te bewegen (te *nudgen*) om meer tijd, aandacht en geld te besteden aan de op die platforms aangeboden producten en diensten. Hoewel het binnen een informatierijke omgeving tot op zekere hoogte noodzakelijk is om gebruikersopties te filteren en te rangschikken, kan er individuele en collectieve schade ontstaan in gevallen waarin de belangen van een digitaal platform afwijken van die van een gebruiker.

Ten behoeve van dit onderzoek wordt hypernudging beschouwd in het kader van de macht van de grote technologiebedrijven en hun prominente rol bij het vormgeven van de digitale markten. Deze bewuste keuze vloeit voort uit het feit dat het onderzoek is ondergebracht bij het project “Modern Bigness”, dat behoort bij Starting Grant nr. 852005 van de Europese Onderzoeksraad (ERC). Op basis van dat project wordt voor de digitale conglomeraten een nieuwe taxonomie van macht ontwikkeld, en beoordeeld of het Europese mededingingsrecht kan en moet optreden tegen deze macht, aangezien die verder reikt dan het marktdomein alleen. Tegen deze achtergrond neemt deze dissertatie de vorm aan van een juridische en normatieve beoordeling van hypernudging door de grote technologiebedrijven, als een van de uitingen van hun samengevoegde macht, in het licht van het in het Europese mededingingsrecht vastgelegde verbod op misbruik van economische machtspositie. De hoofdvraag van dit onderzoek is daarmee:

Welke rol zou het Europese mededingingsrecht moeten spelen bij het bieden van een antwoord op de uitdagingen van hypernudging door de grote technologiebedrijven?

Om tot een volledig antwoord te komen, onderzoek ik hypernudging in relatie tot drie samenhangende, onderliggende thema’s: (1) het transdisciplinaire debat inzake gebruikersbeïnvloeding; (2) het perspectief van het Europese mededingingsrecht, met specifieke aandacht voor het verbod op misbruik van machtspositie; en (3) de bredere digitale beleidsagenda van de EU voor het reguleren van de digitale markten.

Hypernudging in het transdisciplinaire debat inzake gebruikersbeïnvloeding

Online gebruikersbeïnvloeding is geen nieuw verschijnsel. Het discours over het concept “bedrieglijk ontwerp” (*deceptive design*) stamt specifiek uit 2010, toen Harry Brignull, een User Experience (UX) designer, de website *darkpatterns.org* begon,

waarop hij ontwerpelementen van gebruikersinterfaces verzamelde die bedoeld waren om gebruikers bij hun online gedrag te misleiden, bedriegen en manipuleren – een praktijk die ook bekend staat als “donkere patronen” (*dark patterns*). In de daarna verschenen literatuur is voortgebouwd op verschillende categorisaties van deze elementen van bedrieglijk ontwerp en zijn deze uitgebreid, waarbij het accent werd gelegd op de ontwikkeling van empirische studies en taxonomieën. Gezien de razendsnelle technologische ontwikkelingen en de steeds groter wordende rol van datagedreven bedrijfsstrategieën, met als rode draad gebruikersprofilering en -targeting, wordt erkend dat de praktijk van gebruikersbeïnvloeding in opmars is en daarnaast van vorm verandert. Desondanks is deze praktijk in het relevante wetenschappelijke debat en in beleidsdebatten nog maar sinds kort onderwerp van gesprek.

In deze dissertatie definieer en onderzoek ik hypernudging in al zijn aspecten, om daarmee onderzoekers en beleidsmakers een nuttig conceptueel kader te bieden om nader empirisch onderzoek en de verdere problematisering van het verschijnsel op te baseren (hoofdstuk 2). Hierom presenteer ik een origineel geconsolideerd hypernudgingkader, dat uit cumulatieve criteria bestaat die gebaseerd zijn op een nudge-theorie op basis van de gedragseconomie, op de literatuur aangaande Human-Computer Interaction (HCI) inzake digitale nudging en op unieke elementen van hypernudging, zoals gemunt in de interdisciplinaire rechts- en informaticalliteratuur. Daarbij wordt in het bijzonder de nadruk gelegd op die kenmerken van hypernudging die daarvan een geavanceerde vorm van online gebruikersbeïnvloeding maken: hyperpersonalisatie, multidimensionaliteit en aanpasbaarheid aan verschillende gebruikersinterfaces. Voortbouwend op specifieke voorbeelden van hypernudging beoordeel ik daarnaast hoe deze processen tot veelzijdige en diffuse individuele en collectieve schade kunnen leiden.

Hypernudging als misbruik van machtspositie

Dit onderzoek draait in de kern om een juridisch probleem, te weten de analyse van de huidige staat van het Europese mededingingsrecht en de evaluatie van de doeltreffendheid van dat recht bij het aanpakken van veelzijdige hypernudgingsschade. Als rechtsgebied dat nauw verbonden is met het beperken van de negatieve uitingen van marktmacht, biedt het Europese mededingingsrecht een logisch en toch origineel perspectief op de kwestie. Sinds de modernisering van dit rechtsgebied ligt de handhavingfocus immers op de waarborging collectieve interpretaties van economische efficiëntie en consumentenwelvaart. Dit betekent dat individuele consumentenschade – sterk gekoppeld aan discoursen over gebruikersbeïnvloeding – buiten de werkingssfeer van het EU mededingingsrecht valt. Niettemin maakt onderzoek

van casussen op de markten van online advertentietechnologie (“adtech”) (hoofdstuk 4) en spraakassistentie (hoofdstuk 5) duidelijk dat, zodra gebruikersbeïnvloeding op grote schaal en systematisch wordt toegepast, alsnog collectieve schade ontstaat die tot marktverstoringen kan leiden die binnen het huidige paradigma van het Europese mededingingsrecht passen. In het bijzonder zou hypernudging voor ondernemingen met aanmerkelijke marktmacht een manier kunnen worden om uitsluitingsgedrag te vertonen waaruit van een oneerlijke voorkeursbehandeling voor de eigen producten en diensten blijkt (self-preferencing). Dit perspectief van collectieve schade is saillant in het kader van de macht van de grote technologiebedrijven, die het hypernudging van gebruikers op grote schaal mogelijk maakt en versterkt.

De kenmerken en de dynamiek van de digitale markten hebben echter de toepassing van de traditionele instrumenten, methodologieën en schadetheorieën van het mededingingsrecht op de proef gesteld. Doordat de grote technologiebedrijven de maatschappelijke structuren steeds meer online vormgeven, vervaagt het onderscheid tussen markt en niet-markt. Dit is een bijzonder controversiële kwestie in het Europese mededingingsrecht, die een zorgvuldige revaluatie van de juridische grenzen van dat recht vergt.

Teneinde een zinvolle bijdrage te kunnen leveren aan de discussie over de rol van het Europese mededingingsrecht in het licht van het veelzijdige verschijnsel van hypernudging, ontwikkel ik een normatief kader (hoofdstuk 3). Daarvoor breng ik, op grond van de constitutionele beginselen van de EU en haar inzet voor een open en democratische samenleving, zoals gebaseerd op de rechtsstaat, de grondrechten en de publieke waarden, twee kernwaarden in kaart: autonomie, als hoeksteen van vrijheid, en gelijkheid van marktdeelnemers, inclusief gebruikers.

Op basis van de geformuleerde normatieve positie als grondslag van deze dissertatie, is het doel van de gekozen casus betreffende politieke microtargeting (een bepaalde vorm van hypernudging) om zowel de flexibiliteit als de beperkingen van het Europese mededingingsrecht bij de aanpak van de (potentiële) negatieve gevolgen voor de digitale publieke ruimte te laten zien (hoofdstuk 6). Gezien de historische relatie tussen het mededingingsrecht en de democratie kan betoogd worden dat het, met het binnendringen van de samengevoegde macht van de grote technologiebedrijven in de politiek, voor specifieke situaties noodzakelijk kan zijn om overwegingen van efficiëntie en democratische overwegingen tegen elkaar af te wegen, met een voorkeur voor die laatste. Ter nadere verkenning van dit idee onderzoek ik de “norm van het welzijn van de burger” als een vollediger middel waarmee relevante schade in beeld kan worden gebracht. De door het Europese mededingingsrecht te spelen rol bij de aanpak van politieke microtargetingschade dient als complementair te worden gezien,

geïntegreerd in het bredere regelgevingslandschap voor het reguleren van de digitale markten op een wijze die de grondrechten en de publieke waarden in de EU waarborgt.

Hypernudging in de digitale beleidsagenda van de EU

Bij toenemende zorgen over de digitale transitie maakt het Europese regelgevingslandschap voor de digitale markten een transformatie door, die niet alleen wordt gekenmerkt door meer toezicht op de naleving van regelgeving door de machtige digitale platforms, maar ook door een duidelijk merkbare verschuiving richting het waarborgen van de belangen van burgers. In deze context situeer ik hypernudging binnen de bredere digitale beleidsagenda van de EU, waarbij ik mij richt op schadelijke online gebruikersbeïnvloeding. Daarbij onderzoek ik diverse juridische instrumenten die direct of indirect betrekking hebben op aspecten van hypernudging, en besteed ik aandacht aan de opkomende regelgevingsthema's, -voordelen en -beperkingen van de (voorgestelde) juridische kaders. In het bijzonder richt ik mij op de digitale marktenverordening, de digitale dienstenverordening en de voorgestelde AI-verordening, teneinde de complexiteiten te benadrukken waarmee beleidsmakers bij het aanpakken van hypernudging in de gebruikersgerichte digitale economie geconfronteerd worden (hoofdstuk 2).

Nu de EU een duidelijk normatief standpunt definieert waarin de ontwikkeling wordt begunstigd van digitale markten waarop economie en maatschappij samenwerken en de publieke waarden voorrang krijgen, moet nagedacht worden over hoe het Europese mededingingsrecht en -beleid in stelling gebracht kunnen worden om op deze overkoepelende doelstellingen aan te sluiten. In het kader van het bieden van een antwoord op de uitdagingen op het gebied van hypernudging benadrukt deze dissertatie het belang van een actieve rol voor het Europese mededingingsrecht, waarin positieve, normatieve en pragmatische perspectieven worden meegenomen (hoofdstuk 7). Onder toepassing van de huidige mededingingsrechttheorieën op hypernudgingprocessen pleit een normatieve positie voor een grotere rol bij het faciliteren van de co-creatie van de digitale markten in overeenstemming met de EU-waarden. Vanuit het pragmatische perspectief wordt erkend dat het regelgevingslandschap verandert, en wordt de behoefte benadrukt aan een zekere mate van convergentie van regelgeving, zodat gefragmenteerd juridisch denken wordt vermeden. Derhalve doet deze dissertatie een beroep op de handhavers van het mededingingsrecht om zich actief te mengen in discourses over gebruikersbeïnvloeding en om samen te werken met andere regelgevings- en handhavingsinstanties, met het doel om het veelzijdige verschijnsel van hypernudging breed aan te pakken.



Appendices

About the author

Curriculum Vitae

Viktorija Morozovaitė is a postdoctoral researcher at the International and European Law department of the Utrecht School of Law. She is affiliated with the focus area Governing the Digital Society and the Utrecht Centre for Regulation and Enforcement in Europe (RENFORCE). In her research, Viktorija specialises in issues related to digital competition, intersection between competition law and regulation and EU's digital policy.

Prior to her PhD, Viktorija graduated from the University of Aberdeen (Scotland) with a bachelor's degree in 'Law and European Legal Studies' with First Class Honours. During her studies, she spent a year at the European Law School of Maastricht University (2013-2014). After obtaining her bachelor's degree, Viktorija started her LL.M in 'Law and Economics' at Utrecht University, where she graduated cum laude in 2018. After graduation, Viktorija worked briefly as a junior lecturer in the field of public economic law at Utrecht University and started her PhD project in May 2019. Viktorija is also a former Visiting Researcher at the Annenberg School for Communication at the University of Pennsylvania (October 2022 - December 2022) and a Wirtschaftskammer Steiermark Fellow at the Karl-Franzens-Universität Graz (March 2022 - June 2022).

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